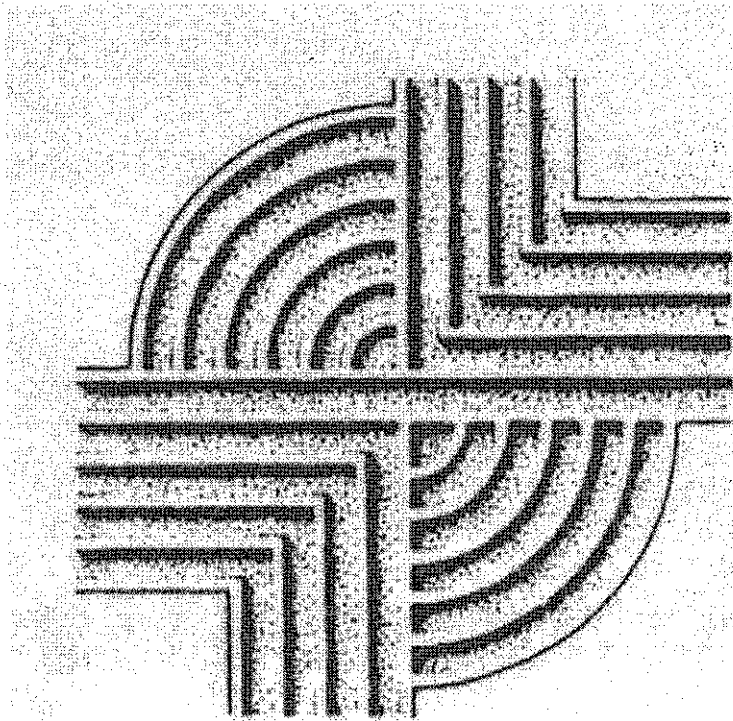


CULTURAL RESOURCES SURVEY OF
THE SCE&G SALUDA DAM COMPLEX,
LEXINGTON COUNTY, SOUTH CAROLINA



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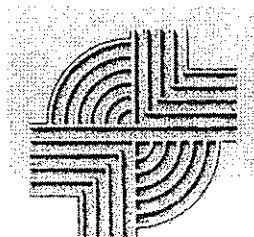
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CULTURAL RESOURCES SURVEY OF THE SCE&G SALUDA DAM COMPLEX, LEXINGTON COUNTY, SOUTH CAROLINA

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January 8, 2001

This report is printed on permanent paper ∞

ABSTRACT

This report provides the results of a cultural resources investigation of the 550 acre Saluda (Lake Murray) Dam Complex, situated in north central Lexington County, about 11 miles northwest of Columbia. The study was conducted by Dr. Michael Trinkley of Chicora Foundation for South Carolina Electric & Gas (SCE&G) and is in anticipation of extensive modifications to the Saluda Dam mandated by the Federal Energy Regulatory Commission (FERC). The work is intended to assist SCE&G comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

Historically the area appears to have been sparsely settled during the nineteenth century and even into the early twentieth century there were few farms in the immediate area. This dearth of settlement may have been the result of poor soils and extensive erosion. By the early twentieth century settlement appears to have been focused on the road network leading to the two ferries, called Hope Ferry and Dreher Ferry, east and west of the study tract. Even along Bush River Road, which runs along the north edge of the project, there was little settlement.

Although I-26 is situated only six miles to the northeast and the complex is situated between the towns of Lexington and Irmo, much of the area is essentially rural in nature. It has only been within the past decade that a number of subdivisions have begun to be constructed in the area and this rural character has begun to fade. As a result, the area of potential effects (APE) was defined as 1.0 mile from the outer edge of the SCE&G site. This has incorporated an APE of approximately 5,500 acres.

Forty-one historic sites were identified within the APE, including 11 (2430126.0-.07, 2430128, 2430303, and 2430304) located on the survey tract. We recommend 24 of these resources not eligible, two potentially eligible (and requiring additional research beyond the scope of this study), and 12 eligible for inclusion on the National Register. Three sites were

found to be less than 50 years in age, but are likely to be eligible when they are old enough. Of these 11 resources on the survey tract, five are recommended eligible (2430127.0, 2430127.02-.04, 2350304), three are recommended not eligible (2430127.01, 2430128, and 2430303), and three are less than 50 years old, but are likely to be eligible when they are old enough (2430127.05-.07).

The archaeological survey consisted of shovel testing at 100 foot intervals along transects laid out at 100 foot intervals covering approximately 250 of the 550 acres. The remaining portion of the tract had been extensively damaged by activities associated with the original dam construction or the use of the facility for power generation. Not surveyed were borrow pits, areas under buildings or substations, the acreage under the dam, the areas used today as ash ponds, the coal depot, and similar locations. We found that even in those areas that appeared intact there was considerable evidence of erosion and logging. Land management activities on the tract are minimal, so there are areas of very dense pine forest, as well as areas almost completely denuded for powerline right-of-ways. The shovel tests throughout the tract revealed very thin soils overlying clay subsoil.

The archaeological investigations identified eight archaeological sites (38LX410, 434-440) and one isolated find (38LX00) on the study tract. These sites include both prehistoric lithic scatters and historic dump sites (no clearly defined domestic sites were identified). The sites are all heavily eroded and extensively damaged by previous cultivation and logging. None evidence good integrity and it is unlikely that any of the sites can address significant research questions. They are all recommended not eligible for inclusion on the National Register.

It is possible that archaeological remains may be encountered in the project area during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to

the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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INTRODUCTION

The investigation of the 550 acre Saluda (Lake Murray) Dam Complex was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. David Haddon of South Carolina Electric & Gas Company (SCE&G). The tract is situated in north central Lexington County, about 11 miles northwest of Columbia and midway between the town of Lexington to the south and Irmo to the north (Figure 1). This particular area of Lexington County, while originally rural, has seen increased growth of subdivisions scattered around the Lake Murray region. Today the area is a mix of old farms, new subdivisions or clusters of trailers, and mixed commercial development.

This work was conducted to assist SCE&G comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800 and is being conducted in anticipation of requesting Army Corps of Engineers permits for the fill of wetlands. The project is mandated by the Federal Energy Regulatory Commission (FERC) which has directed that SCE&G remediate the Saluda (Lake Murray) dam to make it able to withstand a recurrence of the 1886 Charleston earthquake (Richter magnitude ~ 7.5).

This work will involve the construction of a new downstream rock berm for the entire length of the dam, except for the area behind the Saluda and McMeekin powerhouses, where the dam will consist of a roller compacted concrete berm section. Additional rockfill will also be added to the existing dam to widen the top so that SC 6 can be widened to four lanes. Rock for this work will be obtained from an on-site quarry, to be situated on the south side of the Saluda in an area east of existing ash ponds. Upon completion of this work the borrow pit will be used for future dry ash landfill. Construction of the new berms will require the relocation of a gas pipeline (currently under construction), electric transmission lines, an access road on the north side of the Saluda (currently under construction), and powerplant appurtenances

(warehouses, ash handling facilities, waste treatment ponds, roads, sewage lines, etc.).

We anticipate that this work will involve extensive clearing and grubbing, various soil preparation activities, the filling of existing wetlands, heavy equipment staging and movement, increased traffic on the nearby section of Bush River Road (S-107) and on SC 6 across the existing dam, the potential for siltation and erosion associated with the clearing and grubbing activities, the potential for increased dust levels during construction, and increased noise levels and vibration shocks for short durations associated with the various construction activities, especially the blasting associated with the quarrying operations. While not specifically part of this current project, this work will also make directly possible the widening of SC 6. There are likely to be a number of similar direct and indirect effects as a result of this action.

This work has the potential for a variety of primary and secondary effects on historic and archaeological sites. Primary effects in the construction area of course include destruction of these resources as well as siltation or other related damages. Secondary effects to historic structures and resources include the potential for damage from blasting, nuisance dust, and increased traffic. Long-term consequences, especially from the secondary widening of SC 6, include increased traffic, and increased development pressure leading to the loss of the rural character of the area, as well as loss of historic resources.

The study tract is roughly rectangular, measuring about 7,500 feet north-south by 3,000 feet east-west. The northern boundary is Bush River Road (S-107). The eastern boundary is a straight line which runs south from Broad River Road to the Saluda River and continues southward across the Saluda on the spillway bank. This spillway also forms the southern boundary of the project. The western boundary is the existing Saluda (Lake Murray) Dam (Figure 2). These

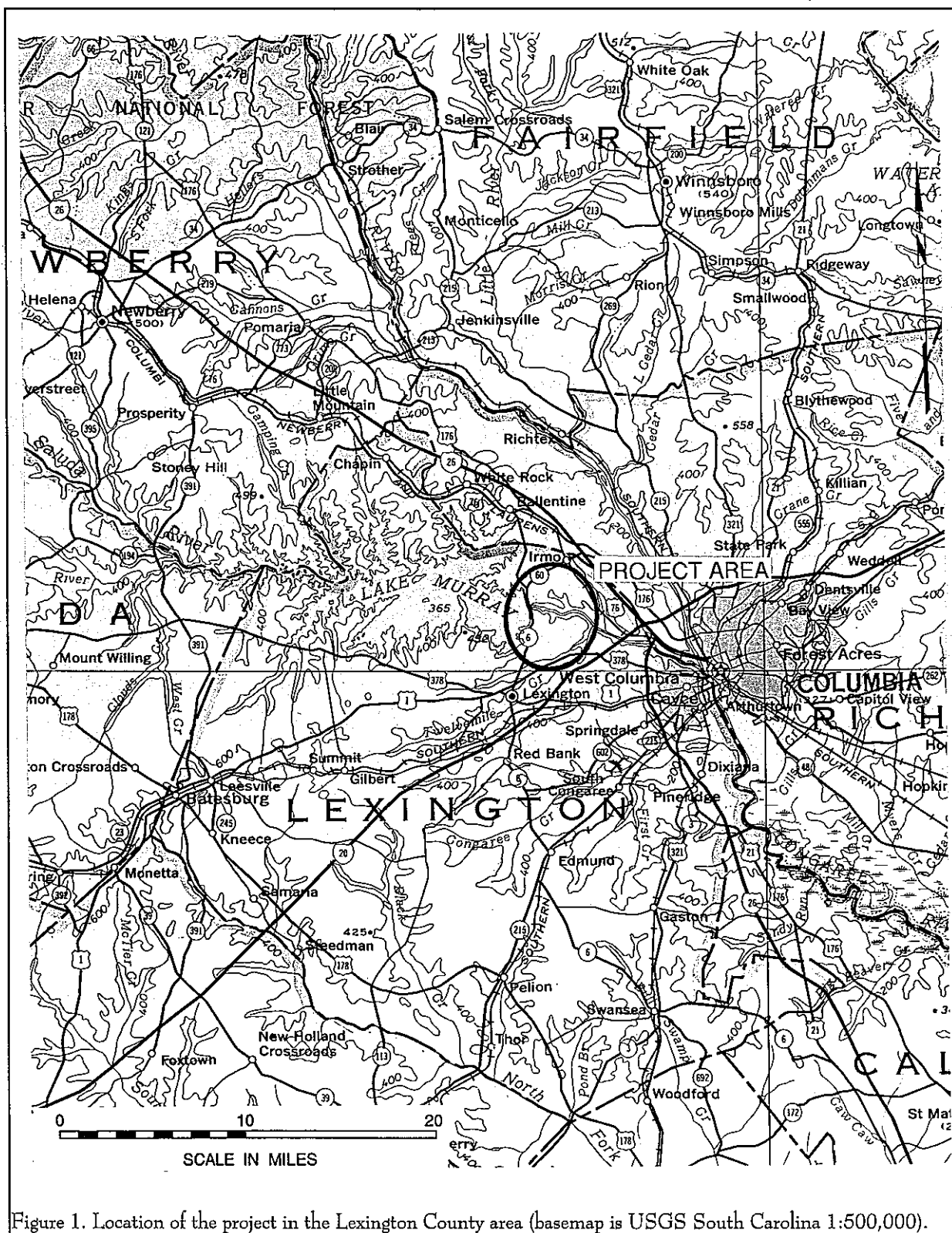


Figure 1. Location of the project in the Lexington County area (basemap is USGS South Carolina 1:500,000).

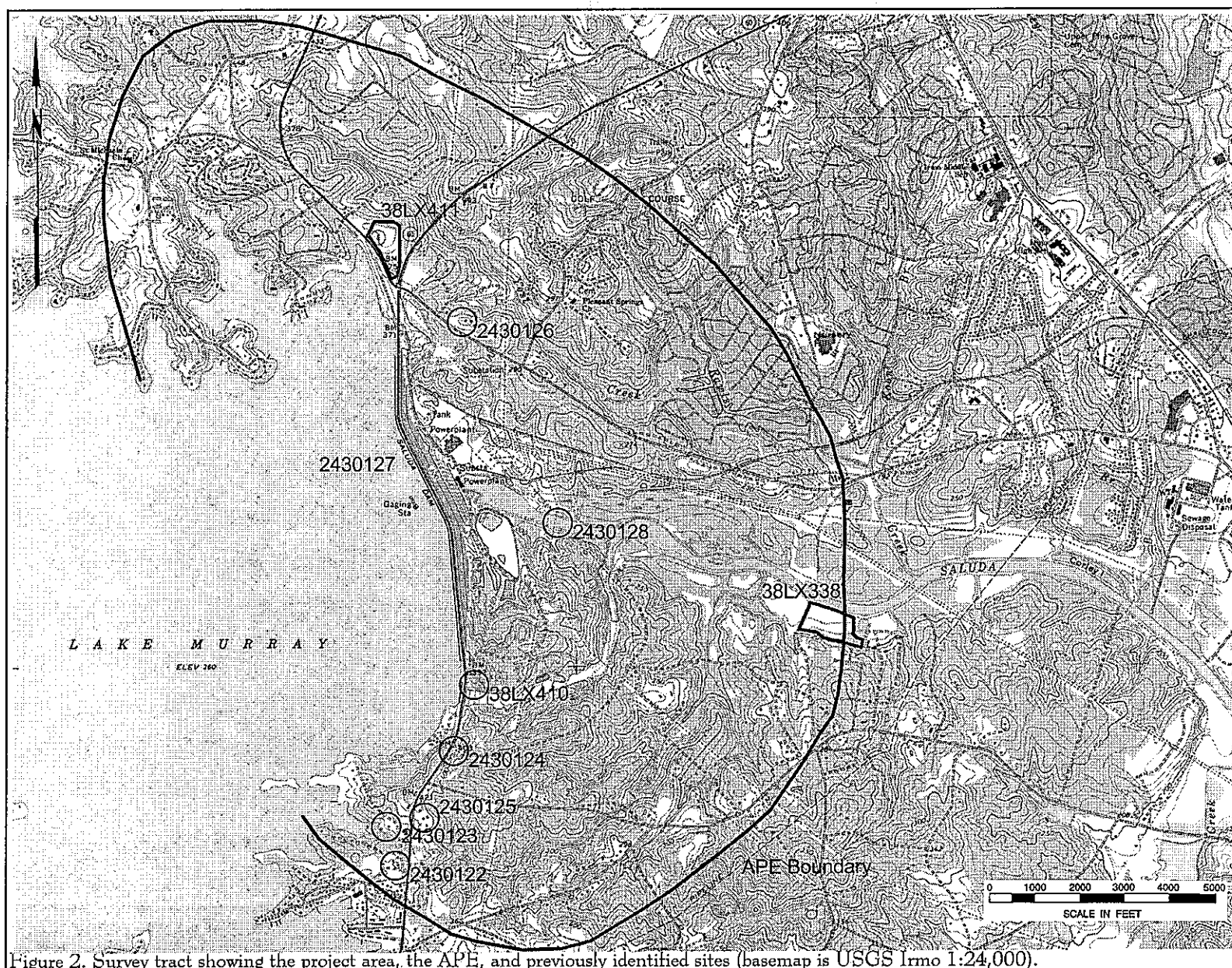


Figure 2. Survey tract showing the project area, the APE, and previously identified sites (basemap is USGS Irmo 1:24,000).

boundaries were established by SCE&G and are thought to contain all of the primary effects of this undertaking.

Chicora was requested to submit a budgetary proposal for an intensive survey by SCE&G on June 1, 2000. A proposal was submitted on June 9, 2000 and a notice to proceed was received July 17, 2000. The archaeological investigation was conducted by Dr. Michael Trinkley. The field crew consisted of Mr. Tom Covington, Mr. Philip MacArthur, and Ms. Monica Wiggers. The field investigations were conducted on August 7-11 and required 160 person hours. The architectural survey was conducted by the author intermittently from August 21-30 and required 32 person hours.

The statewide archaeological site files held by the South Carolina Institute of Archaeology and Anthropology were examined by Mr. Tom Covington on for information pertinent to the project area. Although there were several archaeological sites in the general area, the only site reported from the study tract was 38LX410, the Yninger Cemetery, which is situated on a ridge toe at the southern edge of the project area, just southeast of SC 6 and the existing dam.

The only other archaeological site identified in the general area is 38LX338 recorded in 1993. The site is situated on the wide floodplains of the Saluda River about 1.0 mile downstream from the project area. Early Archaic and possible Paleoindian materials were found eroding from a levee, although the form notes that the area is heavily scoured and it seems unlikely that there is little intact site remaining. This location conforms to type of zone where Coe (1964:11) projected that such sites would be found — an open area where flood waters can eddy immediately downstream of a narrows. The erosive losses at the site is likely the result of the flood control effects of the Saluda dam — the absence of additional siltation coupled with continued plowing.

In addition, the South Carolina Department of Archives and History GIS database was reviewed. There are no National Register of Historic Places buildings, districts, structures, sites, or objects on or within a mile of the project area. Although not identified in the GIS database, we did discover that two

architectural sites had been previous identified in the project tract. One, 2430128, represents the remains of the temporary Saluda River Bridge, while the other, 2430127, is the Saluda Dam complex. In addition, five other architectural sites (2430122-2430126) had been identified in near proximity to the dam. All of these architectural sites were identified during a reconnaissance level survey for the SC 6 expansion (Jordan and Butler 1997) although none had been reviewed by the State Historic Preservation Office (SHPO).

While the project area includes a number of very modern developments (apartments and single family homes), there are still pockets of rural landscape. This, coupled with our understanding of the potential effects of the undertaking, suggested that it was appropriate to define the area of potential effect (APE) for this project to be 1.0 mile. It seems likely that the construction activities might introduce short-term "visual, audible, or atmospheric elements" effects to a distance of about 0.5 mile. We believe that the additional 0.5 mile surveyed provides an ample buffer. In addition, it is possible that secondary effects of the undertaking, most specifically the proposed widening of SC 6 by the SC Department of Transportation, could introduce effects within the entire 1.0 mile area. Since this APE was defined as extending a mile from the outer edges of the 550 acre project zone, the APE incorporates 5,500 acres.

This report details the investigation of the project area undertaken by Chicora Foundation and the results of that investigation.

NATURAL ENVIRONMENT

Physiographic Province

The project area is situated in north central Lexington County on ridges overlooking the Saluda River to the north and south (Figures 1 and 2).

Lexington County, situated in the approximate center of South Carolina, is bounded to the northeast by Richland County with a portion of the boundary marked by the Congaree River, to the east Lexington is bounded by Calhoun County and to the southeast is Orangeburg County. Newberry and Saluda counties comprise the northwestern and western boundaries, while to the southwest is Chiquapin Creek and the North Fork of the Edisto River, which separate Lexington from Aiken County.

The county is located within two distinct physiographic provinces — the Piedmont Plateau and the Atlantic Coastal Plain. The northern quarter of the county falls into the Piedmont, while the southern three-quarters are part of the Atlantic Coastal Plain known as the Sandhills. These two provinces are divided by an irregular line, known as the Fall Line, that extends easterly from Columbia (in neighboring Richland County) roughly parallel to and just north of US 1, with the Piedmont Plateau to the north and the Sandhills to the south.

The project area falls entirely into the Piedmont. Physiographically, the area is a thoroughly dissected plain. The relief ranges from nearly level to steep, but it is dominantly gently sloping to moderately steep. Although throughout the Piedmont area the elevations range from 450 feet above mean sea level (AMSL) to 1,014 feet AMSL, the elevations in the project area range around 300 feet and the terrain is characterized by low rounded hills and sparse remnants of an upland sedimentary plateau (Heron and Johnson 1958).

The drainages form a dendritic pattern and

throughout the Piedmont this terrain has been extensively dissected and degraded. The Saluda River and its tributaries, such as Fourteenmile and Twelvemile creeks drain the northern third of the county, while the Congaree River and its tributaries, such as Congaree Creek, drain the central third. The southern portion of the county drains southerly into the Edisto River.

Two of the more interesting features concerning this area, which served to promote the nineteenth century development of Dreher Shoals as a mill site, was its straight channel and fast flowing water. In fact, Joffe Coe (1964:11) identified this particular setting as conducive to the preservation of archaeological sites. He observed that in such areas where the rivers fall rapidly, their beds are cut narrow and the water flow at a high velocity. In places there are "narrows," where projecting fingers of resistant rock extend into the floodplain. He observed that, "behind these projecting rocks the river forms large eddies when it is in flood and deposits sand and silt at a faster rate than elsewhere along the narrow floodplains (Coe 1964:11). It is in these locations that sites can become buried.

It is also in these areas, during the early twentieth century, that a series of hydroelectric dams and power plants were established. In fact, it was about 4 miles above the Doerschuk Site in North Carolina that the Narrows Dam was constructed by the Aluminum Company of America (now Alcoa) in 1917. At that time its power head of 179 feet was the highest in the South. It was only a few years later that research found a dam at Dreher Shoals — today called Saluda Dam — could provide a power head of 185 feet.

So not only do areas such as this provide close contact with a wide range of physiographic regions and resources important to prehistoric occupants, but there is also a potential that early sites will be preserved. This is documented by the presence of 38LX338 about 2

miles downstream from the Saluda or Lake Murray Dam. This site also reveals another feature of importance. While the area for thousands of years evidenced more deposition than erosion, two factors seem to have changed this process. The construction of dams, such as the Saluda Dam, controlled flooding and minimized the potential for deposition, while at the same time, erosive cultivation practices continued with great intensity. As a result, 38LX338 appears to be have been extensively damaged, with plowing going into the subsoil so that today there are only remnant areas of that previous deposition.

Geology and Soils

Most of the rocks of the Piedmont are gneiss and schist, with some marble and quartzite (Hasselton 1974). Some less intensively metamorphosed rocks, such as slate, occur along the eastern part of the province from southern Virginia into Georgia. This area, called the Slate Belt, is characterized by slightly lower ground with wider river valleys. Consequently, the Slate Belt has been favored for reservoir sites (Johnson 1970), as well as prehistoric occupation (see Coe 1964). In Lexington County many of the Piedmont soils, such as the Nason-Georgeville unit, are weathered from argillites rich in silica and alumina. Other soils are formed in saprolite that weathered from crystalline rocks and "Carolina slates". Soils from the river floodplains formed in sediment that washed from the uplands of the Piedmont province.

According to the work of Heron and Johnson (1958), the project area consists primarily of quartz-microcline gneiss. They note that south of the Saluda River and east of the dam is an area of gneissic rock. Just beyond is the Carolina slate group — part of an extensive range of metamorphosed volcanic and sedimentary rocks. To the south of the Saluda are primarily felsic rocks, such as argillites, while to the north are predominantly mafic rocks, such as hornblende gneiss and chloritic schists.

At the northwestern edge of the project tract there is also an area of dark bodied biotite gneissic-granite rock. Their research also reveals a very narrow floodplain in the project area, which then flares out substantially about 2 miles east of the dam. On the

north side of the Saluda the floodplain is about 2,000 feet in width at Rawls Creek, but only about 500 feet in width in the project area.

Lawrence (1976; Figure 3) identifies only four soil series in the project area. The bulk of the tract, both north and south of the Saluda River, is classified as Cecil fine sandy loams with slopes ranging from 2 to 15%. Where the slopes are under 6% a typical profile consists of an Ap horizon about 0.5 foot in depth of brown (7.5YR4/2) fine sandy loam overlying about 0.2 foot of yellowish-red (5YR4/8) sandy clay loam. This overlies about 2.2 feet of red clay that forms the B21t horizon (Lawrence 1976:11). On slopes over 6% erosion is a serious concern.

Also present in a restricted area on the north side of the Saluda in the project area are Enon silt loams. An intact profile would reveal an Ap horizon about 0.5 foot in depth consisting of a dark, grayish-brown (10YR4/2) silt loam. This overlies about 0.2 foot of light yellowish-brown (2.5YR6/4) silt loam. Below is about 0.3 foot of light olive-brown (2.5YR5/4) silty clay loam. This overlies a subsoil of dark-brown (7.5YR4/4) clay. Even on 2-6% slopes this soil is very susceptible to erosion (Lawrence 1976:17).

The floodplain in the survey area consists of Congaree silt loams on the north bank and Toccoa fine sandy loams on the south bank. The Toccoa soils have an Ap of about 0.8 foot of brown (7.5YR4/4) fine sandy loam over a subsoil of brown (7.5YR5/4) fine sandy loam (Lawrence 1976:35). The Congaree soils have an Ap about 0.7 foot in depth of dark brown (7.5YR4/4) silt loam that grades into a dark yellowish-brown (10YR3/4) silt loam subsoil at about a foot (Lawrence 1976:13).

The 1934 South Carolina Erosion Survey by M.W. Lowry (1934) found that all of the south side of the Saluda River exhibited moderate sheet erosion and occasional gullies, as did much of the area on the north side of the Saluda. There was, however, an area at the northwest corner of the survey tract that was classified as having severe sheet erosion with frequent gullies — evidence that erosion throughout the tract was significant by the early 1930s.

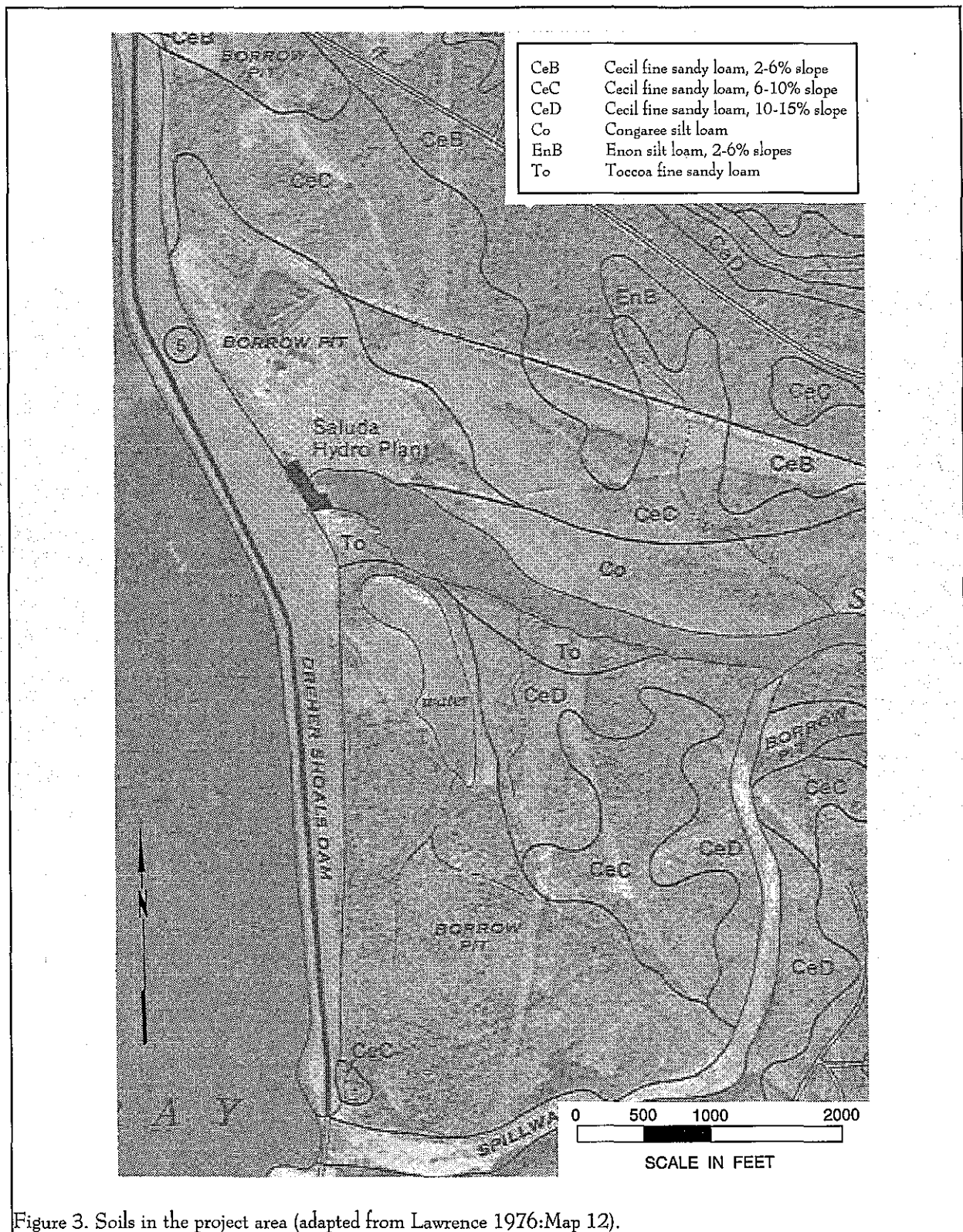


Figure 3. Soils in the project area (adapted from Lawrence 1976:Map 12).

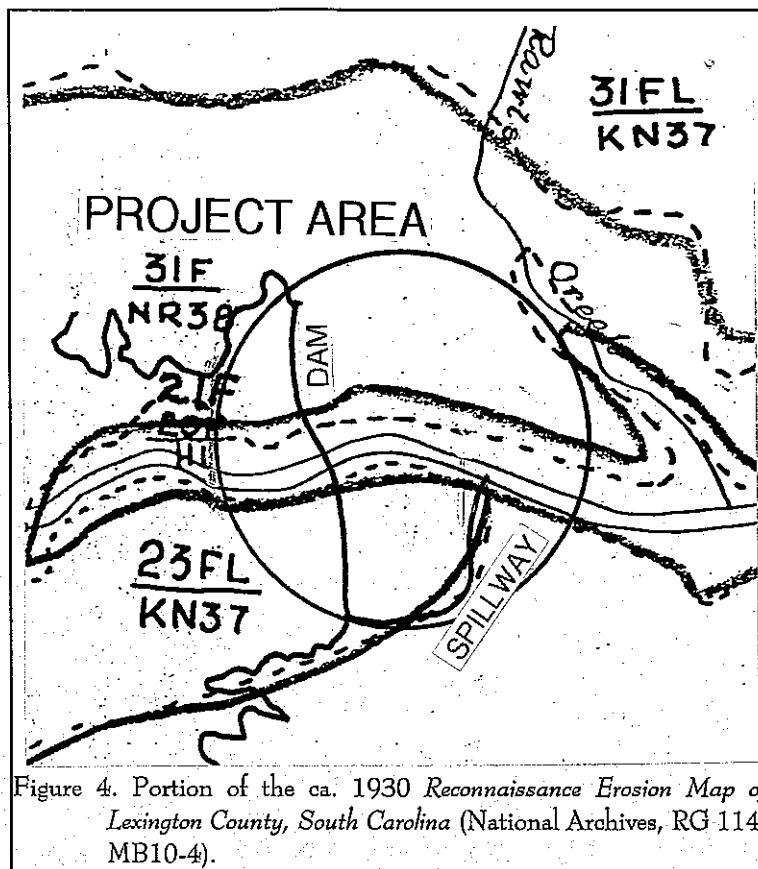


Figure 4. Portion of the ca. 1930 *Reconnaissance Erosion Map of Lexington County, South Carolina* (National Archives, RG 114, MB10-4).

A far more detailed assessment of the soils in this area is provided by the undated (ca. 1930) *Reconnaissance Erosion Map of Lexington County*, produced by M.W. Lowry and C.B. Gay (National Archives, RG 114, MB10-4). This map (Figure 4) reveals that all of the area on the north side of the Saluda River was classified as "Severe Sheet Erosion Frequent Gullies," while on the south side the condition was only marginally better, with the soils identified as "Severe Sheet Erosion Occasional Gullies."

Although Lexington County is not directly incorporated into Trimble's study of erosion in the Southern Piedmont, it is adjacent to the portion of his study area which has lost up to 1.1 foot of soil through erosion in the nineteenth and early twentieth centuries (Trimble 1974:3). It is adjacent to, and actually part of, the area classified by Trimble as having high antebellum erosion land use with postbellum continuation and belonging to his Region III — the Cotton Plantation

Area (Trimble 1974:15).

There are no pre-dam aerial photographs for the project area, but the first ones available in 1939 show that areas adjacent to Bush River Road on the north side of the Saluda were still in cultivation. By 1943 the cultivated acreage had declined, but there were still at least two open, cultivated fields north of the Saluda in our project area, as well as several others which had gone out of cultivation within the past decade (based on the size of the trees on the parcels). This aerial also reveals the extensive ground alteration caused by the dam construction — a topic which will be discussed in more detail in the historic synthesis.

A series of aerial photographs from 1951 through 1981 reveal that cultivation was abandoned on the survey tract sometime between 1959 and 1966. Since that time the aerials reveal periodic construction activities, as well as logging, but no evidence that any of the study area was under cultivation. Nevertheless, it is almost certain that erosion continued. For example, while studies reveal that erosion even on undisturbed Piedmont soils is upwards of 0.03 tons per acre per year, the typical erosion caused by logging is 0.36 tons per acre per year and mechanical site preparation, used in the project, area can result in 6.67 tons of soil loss per acre per year (U.S. Department of Agriculture 1983:25).

In 1826 Robert Mills dismissed the Piedmont soils in Lexington District, referring only to the "sandy region," which he claimed comprised "the largest portion" of the district (Mills 1972 [1826]:612). In adjacent Richland District, however, he commented that similar lands could be classified as "Fourth class — The first quality pine land . . . possesses a dark-coloured mould, with a substratum of clay; it is well calculated to produce cotton, wheat, and corn" (Mills 1972 [1826]:696). Further into the Piedmont Mills offered more detail. For example, in Newberry County to the northwest, he remarked that "the clay, or as they are

termed, mulatto lands, are best adapted to wheat and tobacco" with cotton grown primarily on the sandier soils (Mills 1972 [1826]:641). In addition he commented that, "the lands are too much neglected; no system of manuring them when they begin to fail is pursued . . . the consequence of which is, that they are washed into gullies and destroyed" (Mills 1972 [1826]:653).

Climate

Elevation, latitude, and distance from the coast work together to affect the climate of South Carolina, including the Piedmont. In addition, the more westerly mountains block or moderate many of the cold air masses that flow across the state from west to east. Even the very cold air masses which cross the mountains are warmed somewhat by compression before they descend on the Piedmont.

Consequently, the climate of Lexington County is temperate. The winters are relatively mild and the summers warm and humid. Rainfall in the amount of about 46 to 48 inches is adequate, although less than in some neighboring counties. About 27 inches of rain occur during the growing season, with periods of drought not uncommon during the summer months. As Hilliard illustrates, these droughts tended to be localized and tended to occur several years in a row, increasing the hardship on those attempting to recover from the previous year's crop failure (Hilliard 1984:16). Perhaps the best wide-scale example of this was the drought of 1845, which caused a series of very serious grain and food shortages throughout the state.

The average growing season is about 225 days, although early freezes in the fall and late frosts in the spring can reduce this period by as much as 30 or more days (Lawrence 1976:83). Consequently, most cotton planting, for example, did not take place until early May, avoiding the possibility that a late frost would damage the young seedlings.

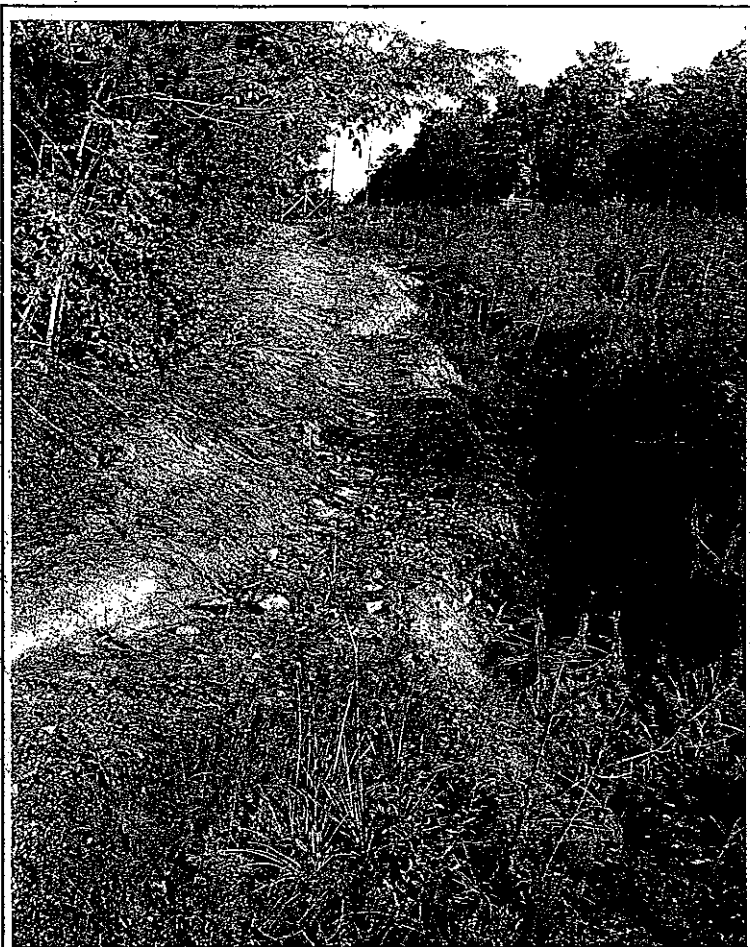


Figure 5. Area of still active erosion on a road adjacent to a powerline easement in the study area.

Floristics

Piedmont forests generally belong to the Oak-Hickory Formation as established by Braun (1950). Regardless, the potential natural vegetation of the project area is the Oak-Hickory-Pine forest, composed of medium tall to tall forests of broadleaf deciduous and needleleaf evergreen trees (Küchler 1964). The major components of this ecosystem include hickory, shortleaf pine, loblolly pine, white oak, and post oak. In actuality, the Piedmont is composed of a patchwork of open fields, pine woodlots, hardwood stands, mixed stands, and second growth fields. Shelford (1963) includes the Carolina Piedmont in the Oak-Hickory zone of the Southern Temperate Deciduous Forest Biome.



Figure 6. Logged area in survey tract on the north side of the Saluda River.

Today little of the study tract exhibits anything resembling these original forests. Years of cultivation followed by logging activities have rendered most of the area eroded and supporting a relatively limited forest of pines with a few mixed hardwoods. There are, however, small enclaves of diversity. For example, in the wetland areas there are more mesic and hydric species, while along the narrow floodplain there are species such as beech, ash, hickories, and birch, with willow oaks and redbud as understory species. Many of these areas exhibit dense vegetation and it seems unlikely that much has taken place on the study tract in terms of forest management.

Prehistoric Environment

A reconstruction of paleo-environmental features has gradually emerged within the past several decades and is based on the work of Whitehead (1965, 1967, 1972, 1973) and Watts (1970, 1975, 1980). Unfortunately, our understanding of environmental change is general and is based almost entirely on pollen

analysis of lake sediments and buried organic layers situated in Piedmont areas outside South Carolina. The pollen studies give evidence of vegetational changes which in turn provide suggestions concerning climatic change. These studies can be important to the archaeologist because they allow inferences to be drawn on the nature of the cultural-environmental interactions, such as the adaptive shifts human populations made to counter ecological shifts. It is recognized that these inferences must be based on the paleoenvironment, not the extant environment.

Based largely on work from southeastern Virginia and North Carolina, Whitehead (1965) has employed a tripartite division of the preceding 25,000 years: Full Glacial (25,000 - 15,000 B.P.), Late Glacial (15,000 - 10,000 B.P.), and Post-Glacial or Holocene (10,000 B.P. - present).

During the Full Glacial the Coastal Plain was boreal, although the vegetation was sparse, which suggests a relatively dry climate. Voorhies (1974), based on a paleontological assemblage from east-central Georgia, suggests a cool, moist climate instead. Watts' (1980) work from White Pond at the edge of the Inner Coastal Plain, found jack pine, red spruce, and herbs, which appear to reflect a boreal forest climate. During the Late Glacial period there was a gradual change to a hemlock-northern hardwoods forest type and eventually to a modern condition. From White Pond, Watts (1980) identified a forest dominated by oak, hickory, beech, and ironwood and interprets this assemblage as

a mesic deciduous forest typical of a cool and moist environment.

The mesic deciduous forest began to change early in the Holocene and was replaced by a more xeric forest comprised of modern flora. Again from White Pond, Watts (1980) notes the rapid loss of hickory, beech, and ironwood after 9,500 B.P. with the equally rapid rise of southern pine species. The oak species remain, and sweet gum and tupelo are found. For a brief synopsis of the environmental changes occurring around 10,000 B.P. the discussion by Anderson and O'Steen (1992:3) is particularly useful, especially since it recognizes the different zones within South Carolina.

An essentially modern flora is postulated by Whitehead (1965) and Watts (1971) by 5,000 B.P. with the spread of oak-hickory forests. But this, however, fails to recognize the extraordinary importance of the changes occurring during this period. As Sassaman and Anderson note:

the period of mid-Holocene global warming referred to variously as the Altithermal, Hypsithermal, and Climatic Optimum is the Middle Archaic Period, as its effects on vegetation and fauna are considered to be so dramatic that they completely reconfigured patterns of human settlement, subsistence, social relations, and technology (Sassaman and Anderson 1994:6).



Figure 7. Dense second growth forest in the survey area next to overgrown powerline easement.

Unfortunately, as Sassaman and Anderson note, there are relatively few data available for South Carolina and the situation, even now, is far from clear. In fact, while there are mounting data arguing for dramatic changes in the American Midwest, the evidence from the Southeast is, at best, ambiguous. Sassaman and Anderson (1994:7-12) review the available data without arriving at any widely accepted consensus.

When the palynological data are explored, there is evidence that pines advanced in the Coastal Plain, but may have been held back, at least to some degree, in the Piedmont. This spread of pine, it seems, may be associated with the shift of Middle Archaic populations into the upper portions of the state, or at least helped focus attention on "oases of hydric and mesic communities" (Sassaman and Anderson 1994:10).

If geological and soils evidence is examined,

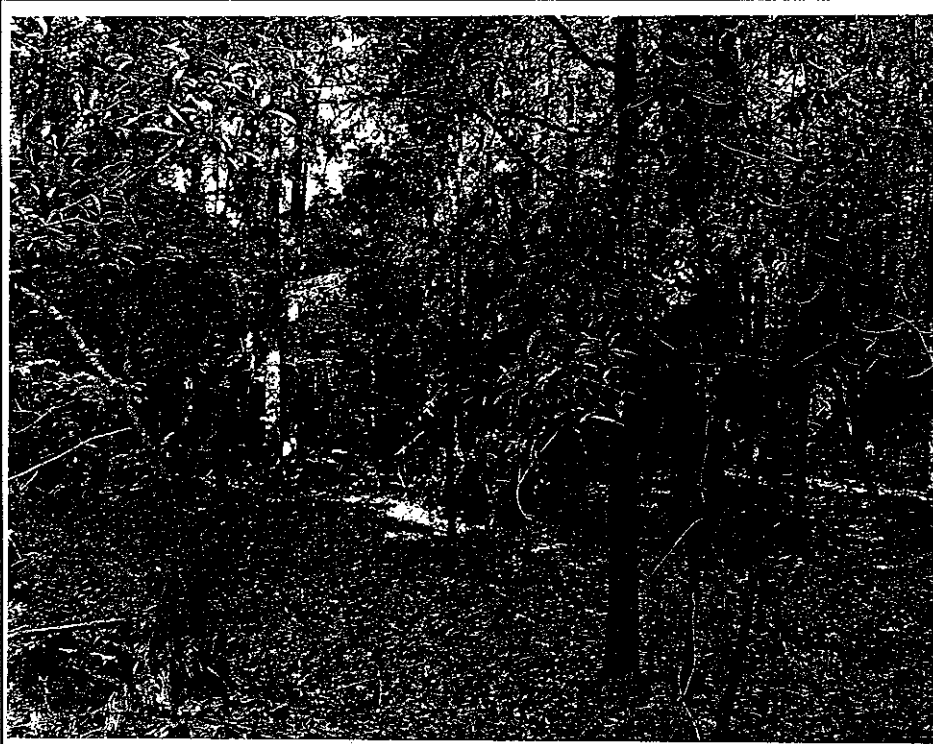


Figure 8. Open, more mesic, forest closer to the Saluda River.

there seem to be two focused camps — those arguing that in general South Carolina was fairly moist and those who see cycles of limited moisture followed by chronic dry conditions. Although there are too few data to support one proposition over the other, acceptance of cycling might help explain a broad range of site conditions. Erosion seen in the geological record may be from either periods of wet weather or from dry conditions with the denuding of the landscape. Regardless, these erosional periods may explain at least some of the Middle Archaic stratigraphic profiles.

PREHISTORIC AND HISTORIC SYNOPSIS

Prehistoric Overview

Overviews for South Carolina's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared. There are, in addition, some "classic" sources well worth attention, such as Joffe Coe's *Formative Cultures* (Coe 1964), as well as some new general overviews (such as Sassaman et al. 1990 and Goodyear and Hanson 1989). Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Sassaman and Anderson (1994) for the Middle and Late Archaic and by Anderson et al. (1992) for the Paleoindian and Early Archaic. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the study areas. For those desiring a more general synthesis, perhaps the most readable and well balanced is that offered by Judith Bense (1994), *Archaeology of the Southeastern United States: Paleoindian to World War I*. Figure 9 offers a generalized view of South Carolina's cultural periods.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P.¹, is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points, side scrapers, end scrapers; and drills (Coe 1964; Michie 1977; Williams 1965). Oliver (1981, 1985) has proposed to extend the Paleoindian dating in the North Carolina Piedmont to perhaps as early as 14,000 B.P., incorporating the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, as representatives of the terminal phase. This view, verbally suggested by Coe for a number of years, has

¹ B.P. is "Before Present," with the present defined as 1950.

considerable technological appeal.² Oliver suggests a continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is somewhat dated, but has been summarized by Charles and Michie (1992). They reveal a widespread distribution across the state (see also Anderson 1992b:Figure 5.1) with at least several concentrations relating to intensity of collector activity. What is clear is that points are found fairly far removed from the origin of the raw material. Charles and Michie suggest that this may "imply a geographically extensive settlement system" (Charles and Michie 1992:247).

Although data are sparse, one of the more attractive theories that explains the widespread distribution of Paleoindian sites is the model tracking the replacement of a high technology forager (or HTF) adaptation by a "progressively more generalized band/microband foraging adaption" accompanied by increasingly distinct regional traditions (perhaps

² While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

CULTURAL RESOURCES SURVEY OF THE SALUDA DAM COMPLEX

Dates	Period	Sub-Period	Regional Phases		
			COASTAL	MIDDLE SAVANNAH VALLEY	CENTRAL CAROLINA PIEDMONT
1715	HIST.	EARLY	Altamaha		Caraway
1650	MISS.	LATE	Irene / Pee Dee	Rembert	
1100		EARLY	Savannah	Hollywood	Dan River
		LATE	St. Catherine's / Swift Creek	Lawton	Pee Dee
800	WOODLAND			Savannah	
A.D.			Wilmington	Sand Tempered Wilmington?	Uwharrie
B.C.		MIDDLE	Deptford	Deptford	Yadkin
300					
		EARLY	Refuge		Badin
1000	ARCHAIC		Thom's Creek Stallings		
2000		LATE	Savannah River		
3000			Halifax		
	PALEOINDIAN	MIDDLE	Guilford		
5000			Morrow Mountain		
			Stanly		
8000		EARLY	Kirk		
			Palmer		
10,000			Hardaway		
			Hardaway - Dalton		
12,000			Cumberland	Clovis	Simpson

Figure 9. A generalized cultural sequence for South Carolina (partially adapted from Coe 1964:Figure 116).

reflecting movement either along or perhaps even between river drainages) (Anderson 1992b:46).

Distinctive projectile points include lanceolates such as Clovis, Dalton, perhaps the Hardaway, and Big Sandy (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps (1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992a) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often not conclusively proven by stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.³, does not form a sharp break

with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Many researchers have reported data suggestive of a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few very large, and apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts — these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials

³ The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics

provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period. The importance of the issue in the Sandhills, unfortunately, is not well known.

which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Stanly and Halifax projectile points. Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

Among the most common of all Middle Woodland artifacts is the Morrow Mountain Stemmed projectile point. Originally divided into two varieties by Coe (1964:37,43) based primarily on the size of the blade and the stem, Morrow Mountain I points had relatively small triangular blades with short, pointed stems. Morrow Mountain II points had longer, narrower blades with long, tapered stems. Coe suggested a temporal sequence from Morrow Mountain I to Morrow Mountain II. While this has been rejected by some archaeologists, who suggest that the differences are entirely related to the life-stage of the point, the debate is far from settled and Coe has considerable support for his scenario.

The Morrow Mountain point is also important in our discussions since it represents a departure from the Carolina Stemmed Tradition. Coe has suggested that the groups responsible for the Middle Archaic

Morrow Mountain (and the later Guilford points) were intrusive ("without any background" in Coe's words) into the North Carolina Piedmont, from the west, and were contemporaneous with the groups producing Stanly points (Coe 1964:122-123; see also Phelps 1983:23). Phelps, building on Coe, refers to the Morrow Mountain and Guilford as the "Western Intrusive horizon." Sassaman (1995) has recently proposed a scenario for the Morrow Mountain groups which would support this west-to-east time-transgressive process. Abbott and his colleagues, perhaps unaware of Sassaman's data, dismiss the concept, commenting that the shear distribution and number of these points "makes this position wholly untenable" (Abbott et al. 1995:9).

The controversy surrounding Morrow Mountain also includes its posited date range. Coe (1964:123) did not expect the Morrow Mountain to predate 6500 B.P., yet more recent research in Tennessee reveals a date range of about 7500 to 6500 B.P. Sassaman and Anderson (1994:24) observe that the South Carolina dates have never matched the antiquity of their more western counterparts and suggest continuation to perhaps as late as 5500 B.P. In fact they suggest that even later dates are possible since it can often be difficult to separate Morrow Mountain and Guilford points.

A recently defined point is the MALA. The term is an acronym standing for Middle Archaic and Late Archaic, the strata in which these points were first encountered at the Pen Point site (38BR383) in Barnwell County, South Carolina (Sassaman 1985). These stemmed and notched lanceolate points were originally found in a context suggesting a single-episode event with variation not based on temporal variation. The original discussion was explicitly worded to avoid application of a typology, although as Sassaman and Anderson (1994:27) note, the "type" has spread into more common usage. There are possible connections with both the Halifax points of North Carolina and the Benton points of the middle Tennessee River valley, while the "heartland" for the MALA appears confined to the lower middle Coastal Plain of South Carolina.

The available information has resulted in a variety of competing settlement models. Some argue for

increased sedentism and a reduction of mobility (see Goodyear et al. 1979:111). Ward argues that the most appropriate model is one which includes relatively stable and sedentary hunters and gatherers "primarily adapted to the varied and rich resource base offered by the major alluvial valleys" (Ward 1983:69). While he recognizes the presence of "inter-riverine" sites, he discounts explanations which focus on seasonal rounds, suggesting "alternative explanations . . . [including] a wide range of adaptive responses." Most importantly, he notes that:

the seasonal transhumance model and the sedentary model are opposite ends of a continuum, and in all likelihood variations on these two themes probably existed in different regions at different times throughout the Archaic period (Ward 1983:69).

Others suggest increased mobility during the Archaic (see Cable 1982). Sassaman (1983) has suggested that the Morrow Mountain phase people had a great deal of residential mobility, based on the variety of environmental zones they are found in and the lack of site diversity. The high level of mobility, coupled with the rapid replacement of these points, may help explain the seemingly large numbers of sites with Middle Archaic assemblages. Curiously, the later Guilford phase sites are not as widely distributed, perhaps suggesting that only certain micro-environments were used (cf. Ward [1983:68-69] who would likely reject the notion that substantially different environmental zones are, in fact, represented).

Recently Abbott et al. argue for a combination of these models, noting that the almost certain increase in population levels probably resulted in a contraction of local territories. With small territories there would have been significantly greater pressure to successfully exploit the limited resources by more frequent movement of camps. They discount the idea that these territories could have been exploited from a single base camp without horticultural technology. Abbott and his colleagues conclude, "increased residential mobility under such conditions may in fact represent a common stage in the development of sedentism" (Abbott et al. 1995:9).

From excavations at a Sandhills site in Chesterfield County, South Carolina, Gunn and his colleague (Gunn and Wilson 1993) offer an alternative model for Middle Archaic settlement. He accepts that the uplands were desiccated from global warming, but rather than limiting occupation, this environmental change made the area more attractive for residential base camps. Gunn and Wilson suggest that the open, or fringe, habitat of the upland margins would have been attractive to a wide variety of plant and animal species.

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups with the bulk of our data for this period coming from the Uwharrie region in North Carolina.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type and a small variant from Gaston (South 1959:153-157), developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery.

This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts at the same time they express concern with the application of this typology outside the North Carolina Piedmont (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-

44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in the uplands of South or North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Sandhills of South Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery. Under this scenario the Early Woodland may begin as early as 4,500 B.P. and continued to about 2,300 B.P. Diagnostics would include the small variety of the Late Archaic Savannah River Stemmed point (Oliver 1985) and pottery of the Stallings and Thoms Creek series. These sand tempered Thoms Creek wares are decorated using punctations, jab-and-drag, and incised designs (Trinkley 1976). Also potentially included are Refuge wares, also characterized by sandy paste, but often having only a plain or dentate-stamped surface (Waring 1968). Others would have the Woodland beginning about 3,000 B.P. and perhaps as late as 2,500 B.P. with the introduction of pottery which is cord-marked or fabric-impressed and suggestive of influences from northern cultures.

There remains, in South Carolina, considerable ambiguity regarding the pottery series

found in the Sandhills and their association with coastal plain and piedmont types. The earliest pottery found at many sites may be called either Deptford or Yadkin, depending on the research or their inclination at any given moment.

The Deptford phase, which dates from 3050 to 1350 B.P., is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. The Deptford settlement pattern involves both coastal and inland sites.

Inland sites such as 38AK228-W, 38LX5, 38RD60, and 38BM40 indicate the presence of an extensive Deptford occupation on the Fall Line and the Inner Coastal Plain/Sand Hills, although sandy, acidic soils preclude statements on the subsistence base (Anderson 1979; Ryan 1972; Trinkley 1980). These interior or upland Deptford sites, however, are strongly associated with the swamp terrace edge, and this environment is productive not only in nut masts, but also in large mammals such as deer. Perhaps the best data concerning Deptford "base camps" comes from the Lewis-West site (38AK228-W), where evidence of abundant food remains, storage pit features, elaborate material culture, mortuary behavior, and craft specialization has been reported (Sassaman et al. 1990:96-98; see also Sassaman 1993 for similar data recovered from 38AK157).

Further to the north and west, in the Piedmont, the Early Woodland is marked by a pottery type defined by Coe (1964:27-29) as Badin.⁴ This pottery is identified as having very fine sand in the paste with an occasional pebble. Coe identified cord-marked, fabric-marked, net-impressed, and plain surface finishes. Beyond this pottery little is known about the makers of the Badin wares and relatively few of these sherds are reported from South Carolina sites.

⁴ The ceramics suggest clear regional differences during the Woodland which seem to only be magnified during the later phases. Ward (1983:71), for example, notes that there are "marked distinctions" between the pottery from the Buggs Island and Gaston Reservoirs and that from the south-central Piedmont.

Somewhat more information is available for the Middle Woodland, typically given the range of about 2,300 B.P. to 1,200 B.P. In the Piedmont and even into the Sand Hills, the dominant Middle Woodland ceramic type is typically identified as the Yadkin series. Characterized by a crushed quartz temper the pottery includes surface treatments of cord-marked, fabric-marked, and a very few linear check-stamped sherds (Coe 1964:30-32). It is regrettable that several of the seemingly "best" Yadkin sites, such as the Trestle site (31An19) explored by Peter Cooper (Ward 1983:72-73), have never been published.

Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least 1650 B.P. coexisted with this Triangular Tradition. The Yadkin in South Carolina has been best explored by research at 38SU83 in Sumter County (Blanton et al. 1986) and at 38FL249 in Florence County (Trinkley et al. 1993).

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of the Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

Historical Synopsis

Historical accounts of the territory encompassing the Piedmont began with the DeSoto expedition in 1540 (Swanton 1946). This area, referred

to as the "Up Country" or "Back Country"⁵ interchangeably, was recognized by the Indians and the early settlers to be the hunting grounds of the Lower Cherokee (Logan 1859:6). In these early years the principal source of interaction between the European settlers and the Cherokee involved a loosely organized trading network.

After the establishment of South Carolina as a British province in 1670, organization and delineation into more manageable territorial units began. In 1685, the Proprietors sectioned the new province into four counties. Present Lexington County was largely included in the most southern of these, Colleton County, although the interior remained Indian territory.

Although Carolina was settled by the English as a small cog in the mercantile system, the early economy was based more on Indian trade, ranching, subsistence agriculture, and the harvesting of forest products — all forms of rudimentary plunder — than on the production of raw materials so essential to the wealth and power of England. By 1700, only 20 years after the founding of Charles Towne, the trading post at the Congarees (Congaree Creek near Columbia), was well established (see Michie n.d.). This post was on the path from Charleston to Keowee, the capital of the Cherokee Nation, while other paths lead from the Congarees to the Creek and Catawba nations. It was this pattern of Indian-White relations which lead to the death of six out of every seven Native Americans along the South Carolina coast.

The Yemassee War (1715-1716) resulted in many of the Native American groups in South Carolina being either destroyed, enslaved, or driven out of the region. After the defeat of the Indian threat, the General Assembly opened Indian lands to settlement and in 1718 Fort Congaree was established at the Congarees to protect settlers in the region. Fort Congaree was abandoned and later replaced by Fort Granby, further to the north. The project area, however, was far from safe, apparently being part of the undivided

⁵ Often Lexington is referred to as part of the "Middle Country."

Cherokee and Catawba hunting ground.

When South and North Carolina were divided in the early 1700s there were no interior settlements. In 1730 George II ordered that eleven townships be established in the back country to promote settlement. Within each township, a town would be drawn up fronting the river and each settler would receive a town lot and 50 acres of plantation lands for each family member. Two of these townships, Amelia and Saxe Gotha, are south and west of Columbia and a third, Orangeburg, was located immediately to the west of Amelia, in the Orangeburg area. Lexington has its origins in the Saxe Gotha township.

By the late 1730s settlers were moving into the area between the Wateree and Congaree rivers. These first settlers included not only South Carolinians from the coastal region, but also individuals from Pennsylvania, Maryland, and Virginia. In the Lexington area the first settlers were Swiss bounty settlers who arrived about 1735. In 1744, 600 "Palatine" German immigrants followed, and all-told upwards of 8,000 Germans settled in the Saxe Gotha, Orangeburg, and Amelia townships. All were drawn to the region by the availability of bounty lands and a promotional tract by John Jacob Riemensperger, a Swiss immigrant who was paid a shilling a head for bringing in settlers (Meriwether 1940). By the 1760s there were additional settlers from the Pennsylvania area, spurred by the Indian attacks on Scotch-Irish settlements in Pennsylvania during the French and Indian War.

There was also a wave of English immigrants, lured not only by cheap land, but also displaced by the defeat of Braddock in 1755. Eventually these English settlers would comprise less than half of the settlers in the Lexington area, but would dominate both politics and trade. Nevertheless, it was the strong German and Swiss population which would make the area the cradle of Lutheranism in the southern United States. This concentration of Swiss-German (Deutsch) yeoman farmers and mechanics along and between the Broad

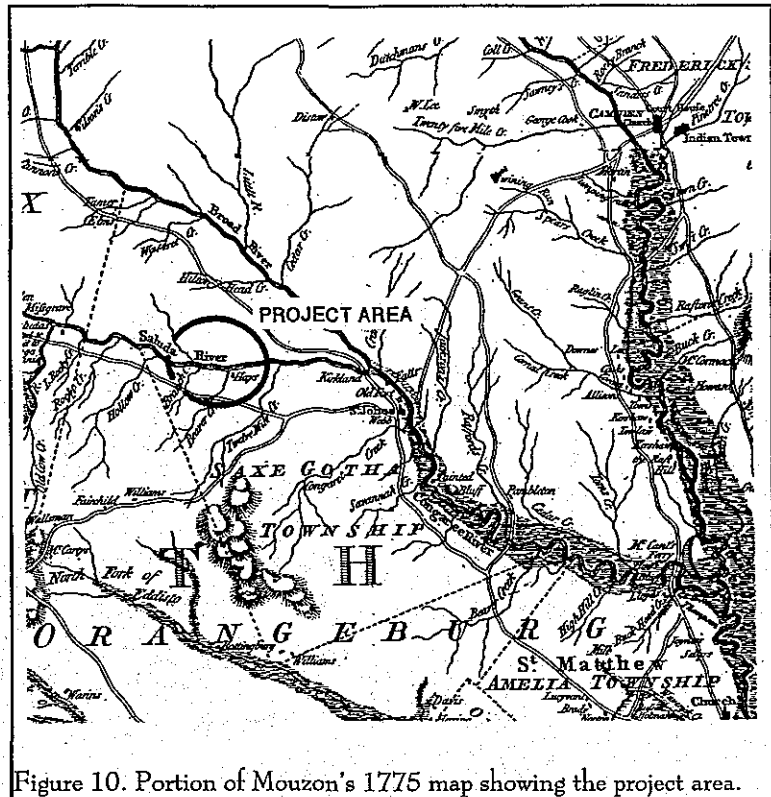


Figure 10. Portion of Mouzon's 1775 map showing the project area.

and Saluda rivers gave the region its name of Dutch Fork. It has been described by historians as a "homogeneous community of ethnic cohesiveness characterized by a society of small farms, disdain for politics, intricate ties of kinship through generations of intermarriage and firm adherence to Lutheranism" (Fox and Harmon 1982).

Nevertheless, DeBrahm's *Map of South Carolina and a Part of Georgia* from 1757 shows the Lexington County area as uncharted — and likely very sparsely settled. Even as late as 1775, Mouzon shows little activity in this region on his *An Accurate Map of North and South Carolina* (Figure 10).

In this early period of European settlement there was little connection with the legal authorities on the coast (i.e., Charleston), leaving the Up County largely autonomous. This led to the emergence of the Regulator Movement of the 1760s, a vigilante organization which attempted to maintain order and provide security through a system of courts and offices

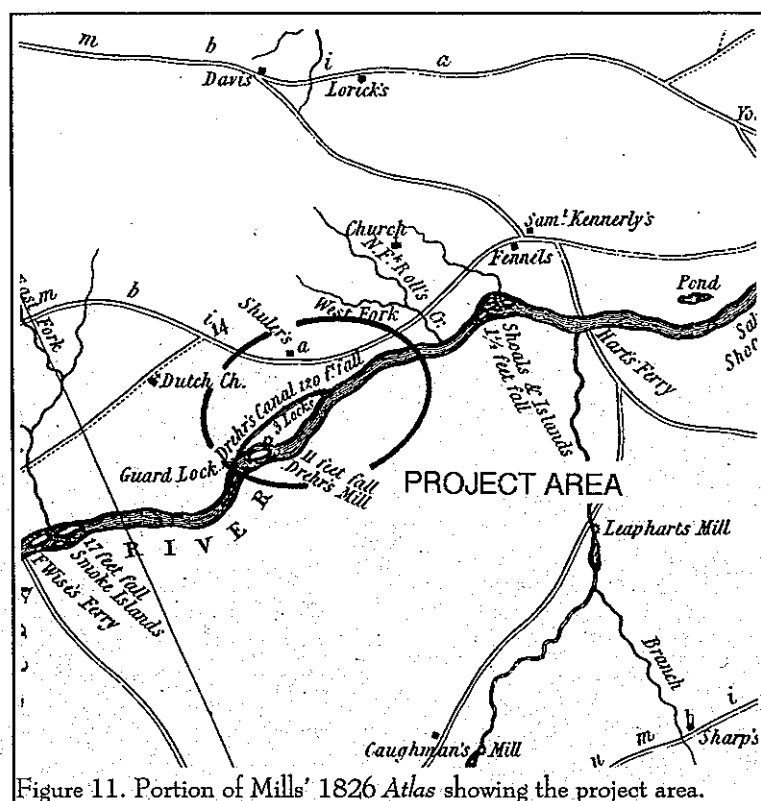


Figure 11. Portion of Mills' 1826 Atlas showing the project area.

(Racine 1980:13). By the eve of the Revolution, two-thirds of the South Carolina population lived in the Up Country (Racine 1980:14).

By the onset of the American Revolution, the population of the Carolina Up Country was quite diverse in its ethnic, religious, and political backgrounds. These differences seemed to localize the hostilities between Whigs and Tories living side by side. The Swiss-German disinterest in politics initially made the Dutch Fork farmers take little notice of the Revolution, or its political and economic causes. What did attract their eventual attention was the behavior of the Tories and British regulars — which eventually made the region a battleground. Fox and Harmon (1982) report skirmishes near Gilbert (The Juniper), Pelion (Lynch's Mill), Hollow Creek, near Lexington (Tarrar Spring), and Clouds Creek. During the Revolution Fort Granby (actually a residence and store built about 1765 by John Chestnut and Joseph Kershaw of Camden) was used as an outpost by the British forces. In May 1781 it was taken by Lee and his forces.

Though the end of the Revolutionary War brought few changes to the life of the Up Country farmers, a solid framework of social and political organization was beginning to emerge. In 1785, an act of the State Legislature formed Lexington County and provided that a court be held at the county seat every three months. The town of Granby was established as the county seat. Initially an important commercial center because of its location at the head navigation on the Congaree, Granby began to decline as Columbia was established and found to be more healthy and less flood prone. By 1837 Granby was virtually deserted.

In 1818 Lexington's county seat was changed to a hill near Twelvemile Creek. A 2 acre site for the new seat was purchased, but the new town of Lexington was very slow to develop. In fact, during its early years it was described as essentially woods, with only a handful of residents or structures. By 1826 Mills commented that the town contained 15 houses, "besides the public buildings" and the population did not exceed 10 families (Mills 1972 [1826]:613-614).

Mills also commented that "the two most formidable obstructions in the Saluda river, (Dreher's [sic] and Beard's falls,) . . . embrace a fall of fifty three feet in less than eleven miles" were "canalled and locked round" (Mills 1972 [1826]:618), yet this feat was far more difficult than Mills implies. In fact, as Kohn and Glenn (1938) reveal, the effort took considerable funds and much effort on the part of the state.

In 1817 an act was passed that required the state's engineer to inspect the rivers for improvement needs. The Saluda was inspected from Columbia northwest and around Dreher's Mill and Ford the survey found a rise of "one foot in the first hundred yards; and in the whole extent of the rapids, six hundred yards, the rise is ten and a half feet" (Kohn and Glenn 1938:A12). By 1820 it was reported that:

From the head of the Saluda Canal,



FIGURE NOT AVAILABLE

Figure 12. Described as only an "Old tunnel formerly used in Navigation System on Saluda River," this was likely the stone culvert or a portion of the aqueduct for Dreher's Canal (Associated Gas and Electric System, n.d.)

to Drehrs, a distance of about nine miles, the river is free from falls, and is obstructed only by a rapid, which may be removed with ease. At Drehrs, there is a fall of 21 feet, in the distance of 1100 yards. The canal is taken out of the river at the Mills, where a short wing dam will give 21.2 feet water at the head of the falls in the driest season. It is extended to the foot of the falls on the same level, where it will enter the river by 3 locks in one chain. The

water in freshes rises very high at the top of these falls and a strong guard lock, rising seven feet above the water level in the canal, was found necessary to give protection to the works below. The canal crosses two ravines and one creek, requiring two culverts and one aqueduct. The whole of this canal has been excavated. One culvert and the aqueduct have been constructed — One occupation bridge, for the use of Drehr's mills, has been erected. The guard lock and dam are now building, and a considerable quantity of cut stone for the works is prepared. A stone building for the Lock-keeper has its walls nearly up. The water that descends the ravine near the head of the works, cannot be discharged without passing very near the bottom of the canal. This space will not receive a stone culvert; one of cast iron has therefore been prepared, and most of the pieces are already delivered. The castings for such a culvert, 60 feet long and 22 inches interior diameter, cost \$300 (Kohn and Glenn 1938:42).

By 1821 the locks were completed, but not tested (Kohn and Glenn 1938:125). Accounts reveal much about the construction, detailing cutting stone, the use of lime mortar and cement, excavation, rock blasting, and hauling rock (Kohn and Glenn 1938:135). By 1822 the works were reported complete, at a cost of \$78,139.63, but their usefulness "depends on the state of the river above" (Kohn and Glenn 1938:164). John Drehr was apparently retained as the "bank ranger" for the canal, earning \$280 a year for this service (Kohn and Glenn 1938:322). As late as 1824 the state reported that although finished, no tolls had yet been collected and the first report of tolls we have found is from 1827 when 578 bales of cotton on 21 boats had passed

FIGURE NOT AVAILABLE

Figure 13. This is the only known photograph of the "Rock House," taken during clearing for the Saluda Dam Associated Gas and Electric System, n.d.)

water back to the river several hundred yards further down. The old canal had long since been choked up when I was born, so that all the water going that way was diverted into this spillway, on which our sawmill stood (Dreher 1927)

The grist mill, but not the sawmill, was destroyed during the Civil War and in 1869 John J. Dreher (1822-1877, the grandson of John Dreher) rebuilt the mill, combining it with the sawmill location. It operated at this combined location for about 15 years, while the original stone mill building was converted into a cotton gin and press. After another decade the mills were moved closer to the house.

through Dreher's Canal, generating \$32.21 in tolls (Kohn and Glenn 1938: 347, 517).

Dreher went on to explain that Dreher shoals are actually two shoals,

The only other substantial information on the Dreher (or Drehr) operations comes from a twentieth century account by John Dreher's great-grandson, W.C. Dreher, who commented that the original Dreher homestead (presumably that of John Dreher, 1765-1847) stood on "the two hills about a mile from the river" and was moved inland in the nineteenth century. Dreher's,

mill was situated not much below the upper end of the shoals and on an arm of the river formed by a rather large island. Fifty yards above the mill was the upper end of the canal built by the state a century ago, and in front of the mill-site there are still the walls of a lock, perfectly built of hewn granite. The canal had a spillway of about 150 yards below the old mill site, that carried the surplus

the upper begins at a point on the south side of the river 200-300 yards below Dreher's Ferry where a broad ledge of granite projects obliquely into the river, tending to shove the water off toward the north bank. Then there is a shoalwater for perhaps 600 yards; after that for probably the like distance, there is a stretch of deep and rather quiet water . . . and below this, finally shoal again, with the water rushing rapidly among small islands down a pronounced slope. At the lower end of the shoals was also a lock in the canal, by which boats were lifted from the lower levels of the stream. On a hill here, very near the water, stands the old Rock House, which was built, it was said, as the home of the lock-

tender (Dreher 1927).

To the right of this stone house, at a higher level on an adjacent hill, was the home of Osman Dreher, at that time owned by Sidney Dreher.

In 1790 the Piedmont, with 81,533 inhabitants, accounted for 32.7% of South Carolina's population. By 1800 the population of this area had increased to 120,805, an increase of 48.2% over the previous decade. One obvious reason, clearly, was the promise of good agricultural lands, by this time a rare commodity in the coastal region.

Tobacco remained the economic mainstay of the Up Country until the early 1800s (Ford 1988:6). The dogged persistence of tobacco, in spite of low yields, poor quality, and strong competition, was to foreshadow the impact of cotton on South Carolina. Interspersed with subsistence crops was indigo, a crop best known from the coastal region, but produced on a number of up country plantations as well. In fact, Henry Laurens and John Lewis Gervais planned to establish a 13,200 acre indigo plantation in the Ninety Six District, but the Revolution diverted them from this plan. Other planters, however, found near immediate wealth in indigo, planting as much as 40 to 100 acres. Others favored smaller acreage, ranging from 10 to 25 acres, which required fewer slaves but still allowed profits during the period from 1740 to 1770 (Huneycutt 1949; Rembert 1990).

The importance of South Carolina indigo waned after the Revolutionary War. Never considered of high quality, the indigo from South Carolina could not compete on the open market after its favored status ended with independence from Britain. Coupled with this political development was the development of improved processing techniques in India which drastically reduced the profitability of South Carolina indigo. The final blow was the 1793 invention of the cotton gin, which opened a new economic era in the State. Indigo continued to be grown into the eighteenth century, and in 1830 nearly 200,000 pounds were exported from South Carolina. Yet, this represented little profit and the bulk of the crop which continued to be grown in South Carolina is best considered a cottage industry.

Lacking a consistently profitable staple crop, the Up Country concentrated on the production of subsistence crops until the early 1800s with the introduction of the cotton gin and the rise of English textile mills, the out-growth of the industrial revolution. This early emphasis on food stuffs, while retarding upward mobility, had a lasting influence on the region, its economy, and its world view. In some areas, however, cotton never was an especially profitable crop.

In 1850 Lexington ranged 22nd (out of 29) in cotton production, reporting only 4,608 bales of cotton. The county's tobacco yield was equally paucity — only 25 pounds. The county produced only 382,518 bushels of corn — ranking 21st in the state. Only 14% of the farm acreage was listed as improved and the average value of a Lexington County farm was only \$1,284. Only Horry ranked lower, with an average value of \$527. The average value in nearby Richland County was \$1,388, while in Laurens County to the northwest the average value was \$2,588. The county had a population of only 12,907, with 43% representing African American slaves (DeBow 1854:302-305). By 1860 it appears that much of the county supported itself on timber and there were 75 saw mills, but only one cotton mill (Fox and Harmon 1982).

There remained an uneasy peace between yeoman and plantation owner in the Up Country. In order to maintain the political support of the yeoman majority, planters were forced to moderate their economic and legal power, molding themselves to the community mores and opinion.

Ford argues that the Up Country actively participated in Secession because of the:

"country-republican" ideal of personal independence, given particular fortification by the use of black slaves as a mud-sill class. Yeoman rose with planter to defend this ideal because it was not merely the planters' ideal, but his as well (Ford 1988:372).

The Civil War had little military impact on Lexington until 1865 when Sherman's army swept through the area. There were several routes, but the

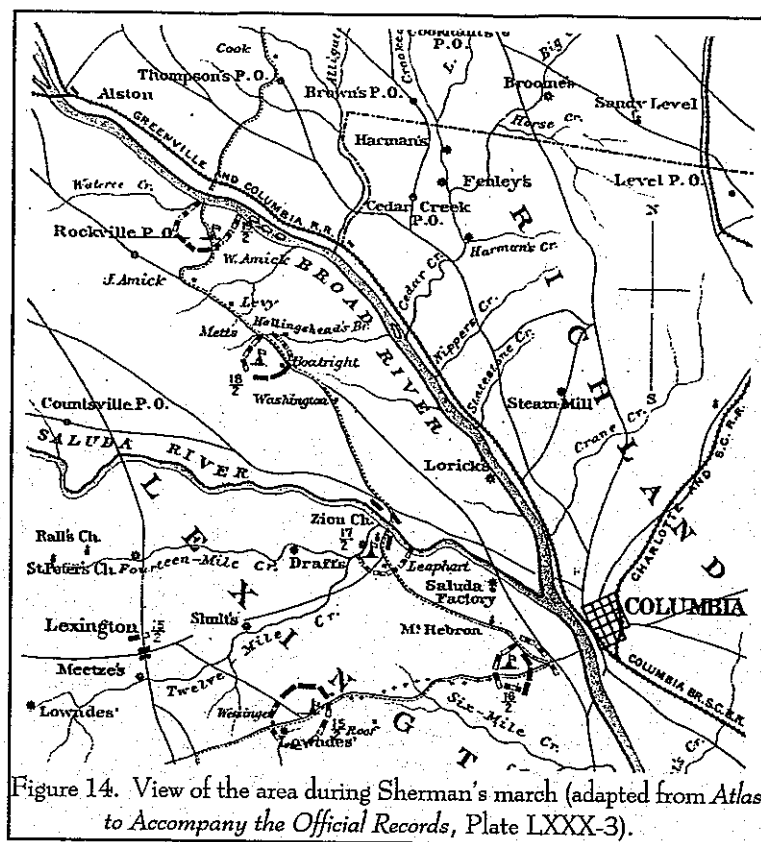


Figure 14. View of the area during Sherman's march (adapted from *Atlas to Accompany the Official Records*, Plate LXXX-3).

most westerly was through Lexington and from there to the ferry at Zion Church, called in the accounts Youngier's (OR 98, page 452). There is a brief mention of a reconnaissance:

Colonel Jones reports that the banks of the Saluda at Wise's Ferry, on this side, are low and swampy, and that a muddy creek has to be passed before reaching it, which would require a bridge. He thinks it a bad place to attempt a crossing. . . . There is a ford on the Saluda at Dreher's Mills, about four miles from this point, but whether it could be now forded is doubted (OR 99, pages 450-451).

Wise's Ferry was situated on the road from Lexington to Countsville; also mentioned was "Swygert's Mill," about 1.5 miles down river from Wise's. Neither were

used and it appears that with the heavy rains, Dreher's ford was also avoided. If, as the oral history accounts suggest, Dreher's mill was burned, a detachment must have come up on the north side of the Saluda, perhaps from the main body heading northward to the Rockville Post Office and the Broad River.

The most important affect of the Civil War on Lexington, however, was the destruction of the plantation system and the creation, in its place, of a tenant system that relied on the hiring of farm laborers for a portion of the crop, a fixed amount of money, or both.

Immediately after the Civil War cotton prices peaked, causing many Southerners to plant cotton again, in the hope of recouping losses from the War. The single largest problem across the South, however, was labor. While some freedmen stayed on to work, others, apparently many others, left. An Englishman traveling through the South immediately after the war remarked that,

"Thirty-seven thousand negroes, according to newspaper estimates, have left South Carolina already, traveling west" (quoted in Orser 1988:49).

The hiring of freedmen began immediately after the war, with variable results. The Freedmen's Bureau attempted to establish a system of wage labor, but the effort was largely tempered by the enactment of the Black Codes by the South Carolina Legislature in September 1865. These Codes allowed nominal freedom, while establishing a new kind of slavery, severely restricting the rights and freedoms of the black majority (see Orser 1988:50). Added to the Codes were oppressive contracts which reinforced the power of the plantation owner and degraded the freedom of the Blacks. The freedmen found power, however, in their ability to break their contracts and move to a new plantation, beginning a new contract. With the high price of cotton and the scarcity of labor, this mechanism caused tremendous agitation to the plantation owners.

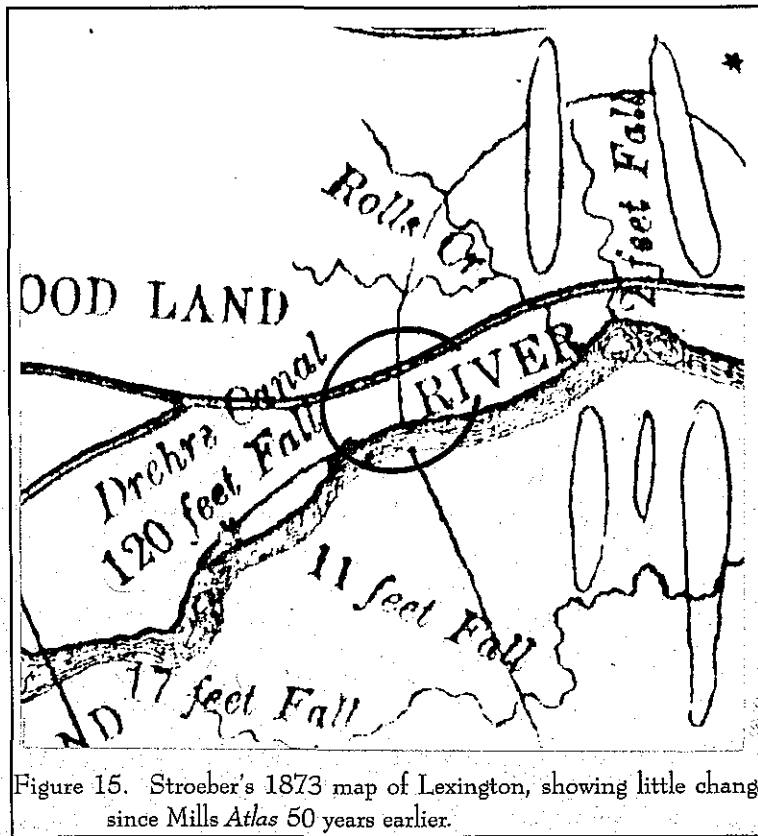


Figure 15. Stroeber's 1873 map of Lexington, showing little change since Mills Atlas 50 years earlier.

Gradually owners turned away from wage labor contracts to two kinds of tenancy — sharecropping and renting. While very different, both succeeded in making land ownership very difficult, if not impossible, for the vast majority of Blacks. Sharecropping required the tenant to pay his landlord part of the crop produced, while renting required that he pay a fixed rent in either crops or money. In sharecropping the tenant supplied the labor and one-half of the fertilizer, the landlord supplied everything else — land, house, tools, work animals, animal feed, wood for fuel, and the other half of the needed fertilizer. In return the landlord received half of the crop at harvest. This system became known as "working on halves," and the tenants as "half hands," or "half tenants."

In share-renting, the landlord supplied the land, housing, and either one-quarter or one-third of the fertilizer costs. The tenant supplied the labor, animals, animal feed, tools, seed, and the remainder of the fertilizer. At harvest the crop was divided in

proportion to the amount of fertilizer that each party supplied. A number of variations on this occurred, one of the most common being "third and fourth," where the landlord received one-fourth of the cotton crop and one-third of all other crops. In cash-renting the landlord provided the land and housing, with the renter providing everything else and paying a fixed per-acre rent in cash.

Between 1880 and 1925 the number of owner-operated farms in the Piedmont increased by 35.3%, while the number of cash renters increased by 375.4% and the number of sharecroppers increased by 155.8%. Moreover, 1880 was the only year between 1880 and 1925 during which a majority of Piedmont farmers were owners, and this occurred in only three counties (Orser 1988:60).

In 1884 the labor system of Lexington County was described:

the share system is most in use, part of the crop being given to labor. When land is rented, price is regulated by quality of the land. [When wage labor is used, wages are] eight dollars per month with board to males, and four to five dollars per month with board to females (The News and Courier 1884:n.p.).

The account continued by "the relative prosperity of the different classes of farmers,"

- 1st. The white men who do their own work.
- 2d. The white men who work themselves and employ additional (colored) labor.
- 3d. The white proprietors who

employ colored labor exclusively.
4th. The colored farmers (The News
and Courier 1884:n.p.).

Cotton gradually became more important in Lexington's agricultural base, so that by 1900 the county's second largest crop (by acreage) was cotton, with the 32,904 acres planted in cotton producing 13,637 bales. The only crop on more land was corn, planted on 51,408 acres and yielding 401,390 bushels. Nevertheless, there was substantial acreage in wheat and oats. Truck farming was increasing, with 1,818 acres in vegetables.

The 3,518 farms in Lexington County had an average size of 134 acres, ranking Lexington third behind Georgetown and Horry counties in average farm size. Moreover only 38% of the county's farms were operated by tenants (22% by cash tenants and 16% by share tenants).

Dreher's Shoals was again the topic of interest, this time for its untapped water power. The Department of Agriculture, Commerce, and Immigration determined that 2,200 square mile drainage had a fall of 50 feet with a potential for 10,000 horsepower (State Department of Agriculture, Commerce, and Immigration 1907:154).

By 1920 the farm size had dropped to 78.6 acres and the rate of farm tenancy had climbed to 46.2%. The 1920s, as one historian has noted, did not roar very loudly in the Midlands (Edgar 1998:483). While cotton prices opened high in 1921 (around 40¢ a pound), they dropped steadily, so that in December the price was down to 13½¢. A crop which cost farmers \$250 million to plant, was worth only \$140 million. County populations showed little growth, rural poverty was rampant, and the boll weevil sucked what little life was left out of cotton. Farms who had been on a spending spree in the teens had no ability to weather the economic crisis and Edgar observes that, "by 1930, after nearly a decade of difficulties, South Carolina agriculture was about to go under" (Edgar 1998:485).

Things were marginally better in Lexington County. While a third of the state's farms were mortgaged, only 29% were mortgaged in Lexington.

And tenancy had actually dropped slightly — to about 42%. In spite of this, Lexington was still a poor county.

Historic Context for the Development of Electric Power Resources

There are a variety of sources that outline a context for the development of electric power resources at a national level. Harvey and Gardner (1997), for example, rely on Hay's (1991) *Hydroelectric Development in the United States, 1880-1940*. Another valuable source is the *History of Public Works in the United States, 1776-1976* (Armstrong et al. 1976).

Hay outlines three periods, with the first described as "pioneering" and lasting from 1880 to 1895. It was during this period that engineers found it was feasible to connect an electric generator (or dynamo) to a water turbine to power arc lights⁶, although there were at least 30 years of slow growth leading to this development. The 1880s were a decade of dramatic changes. A number of hydroelectric plants were put on line. Most generated direct current⁷ for local electric light systems. By 1882 there were four municipally owned electric systems, by 1892 there were 235 (Armstrong et al. 1976:344).

However, long distance transmission remained the single largest obstacle to expansion. This problem was overcome in 1886 when the Westinghouse Electric Company made refinements to AC systems and transformers.⁸ Hay (1991:25) argues that the success

⁶ Arc lighting is created by passing a current between two carbon or graphite rods. It was typically used for street lighting and the illumination of large commercial spaces because the light was so intense.

⁷ Electric current is either direct (DC) or alternating (AC). A direct current is a continuous flow of electric charges in one direction along a conductor. It can be produced from a battery or from a dynamo. An alternating current is one in which the charge flow reverses periodically.

⁸ Today step up transformers in switchyards increase the voltage to push the electricity over long distances, with high voltage transmission lines carrying the electricity to substations. At the substations step-down transformers reduce

of Westinghouse at harnessing the extraordinary power of Niagara Falls in 1895 marked the turning point for the industry. Not only was the economic viability of hydroelectric power when coupled with long-distance power transmission clearly demonstrated, but the industry now had the technology and equipment to apply to other sites.

Hays calls the next phase, from 1895 to 1915, one of innovation and experimentation. Engineers adapted what had been learned to a variety of sites, using new combinations of electrical, hydraulic, mechanical, and civil features. The process of harnessing power improved and previously inaccessible sites were harnessed, with the resulting power transmitted long distances. There were also innovations in dam constructions, as well as in the components of the hydroelectric system that made use of water and converted it to useful electricity. In particular a new generation of turbines were developed that made better use of the available energy.

The next period outlined by Hay was a period of standardization from 1920 to 1930. Harvey and Gardner (1997:2-1) question the five year gap (1915-1920) between the two periods, but note that,

with United States' participation in World War I, changes in hydroelectricity were related to production scale (an increase of two million horsepower in generating capacity between 1917 and 1919) and to increased interconnectedness of systems rather than technological or conceptual developments (Harvey and Gardner 1997:2-1).

Regardless, a key feature of this last period is standardization of plant designs and the technology used in them. For example, one finding was that hydroelectric plants had very low operating and

maintenance costs. They have long life and low rates of depreciation. Unscheduled outages are less frequent than for other types of plants and downtime for maintenance is limited since the plants operate at relatively low speeds and temperatures. This ability to start quickly and make rapid changes in power out-put made hydroelectric plants well suited for serving peak loads, for frequency control of electric current, and for creating excess capacity to meet unexpected power loads. In contrast, steam generating plants (those that took water, converted it to steam, and used this steam to power turbines to create power) took over most base-load production

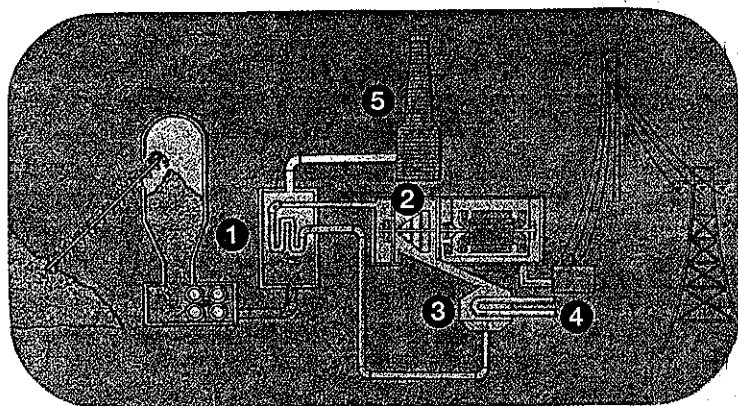
This standardization was the product of several features, including the rise of technical publications; the influence of consulting management and engineering firms; the availability of massive capital from holding companies; and the consolidation of small, local utilities into massive, regional concerns.

This last point is clearly demonstrated by Armstrong et al. (1976:345). They point out that public power originally meant power generated by the city for its citizens. In 1902 there were 851 municipal electric systems. By 1924 this number had increased to 3,047, but from that point on the number declined as investor-owned utilities constructed larger generating plants and interconnected systems were able to provide low-cost power.

While Hay (1991) rightly comments that by the 1930s there were significant changes, at least some of these changes began a decade earlier. In 1920 a Wilson administration bill was passed by Congress. Called the Federal Water Power Act, the bill created the Federal Power Commission and established as national policy the principle of federal regulation of non-federal water projects (Armstrong et al. 1976:348). By 1935 its powers were broadened to include the licensing of investor-owned utilities engaged in interstate commerce.

Just as significantly, the panic of 1929 coupled with the resulting Great Depression brought investor-

the voltage to more useable levels and send the electricity back out over smaller poles. Before the electricity enters a house or business, the voltage is reduced once more by a pole transformer.



In a fossil fuel plant:

1. Coal, ground into a fine powder, is burned inside a boiler producing steam.
2. Steam spins blades on the turbine which turns the generator producing electricity.
3. Steam is cooled in a condenser by water from a nearby river or lake. The cooled steam, now water, returns to the boiler and the cycle is repeated.
4. The cooling water returns to the lake or river, going through cooling towers to remove built-up heat.
5. Electrostatic precipitators in the stack clean up exhaust gases.

In a hydroelectric plant:

1. Water held in the reservoir behind a dam is allowed to enter the powerhouse through penstocks.
2. Water turns the turbine generator producing electricity.
3. The water is then released.

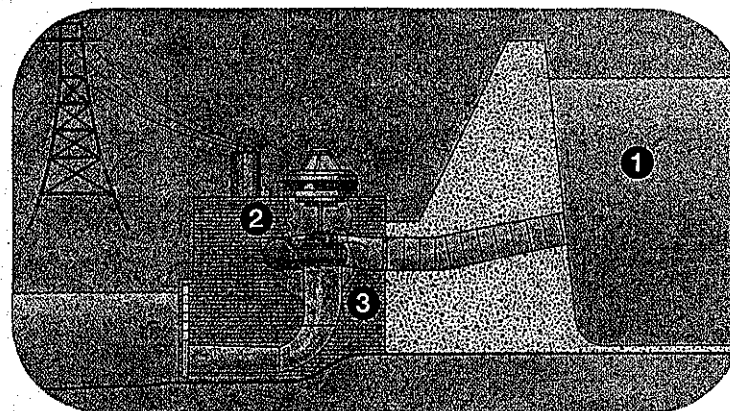


Figure 16. Operation of hydroelectric and fossil fuel plants (adapted from "SCE&G Generation").

owning utility construction to a near standstill. But while non-government electric generation stagnated, the government, under Franklin Roosevelt's New Deal, was quite active.

The Tennessee Valley Authority (TVA) was created in 1933 with the objective of providing economic and social development of the region through the coordinated use of basic resources — and low cost power was considered one of the best approaches to meet this objective. Even while the constitutionality of the TVA was being argued (the *Ashwander Case* went to the Supreme Court, which held in 1936 that the sale of public power was constitutional), private power companies reduced their rates. The TVA also helped organize local power cooperative — which began another long and bitterly court case. This effort, also, was found to be constitutional (Armstrong et al. 1976:349-352).

A somewhat similar project was undertaken in the West, with the principle area being the Columbia River Basin. Here government action through the Reclamation Service resulted in the construction of the Grand Coulee Dam (Armstrong et al. 1976:355-256).

But perhaps the most significant program was that of the Rural Electrification Administration (REA). In spite of the all the power developments by investor-owned and municipal utilities, in 1935 there were still millions without power and only 10% of the rural farms had electric power. In 1935 the REA was established with the primary purpose of developing power in the rural areas of America. The agency was a leading institution, providing low interest rates and a long loan retirement period to encourage rural coverage. During 1935 the number of farms provided with electricity by private companies increased by 175%, yet the private companies still chose to provide power only to selected areas. In 1936 the Rural Electrification Act expanded the agency, providing a variety of different kinds of loans, with a preference to borrowers other than private companies. This served to create the power cooperatives. Power cooperatives reduced the per mile line construction cost at the time from \$2,000 to \$825. The wiring costs per farm were cut from about \$70 to \$55 (Armstrong et al. 1976:380-383).

Rose, in *Cites of Light and Heat*, presents a

somewhat different context, concentrating not so much on the technology as on the political and social events and affects — the "selling" of the need for electricity.

He points out that the process began almost immediately, with commentators describing the yellowish-glow of gas lamps as "yellow, ghastly, and ashamed of themselves," while the new electric-powered arc lamps were described as representing "the splendid triumph of science." The use of electricity to light the city was called an "exemplification of Christianity, science, and progress" (Rose 1995:1).

The "theatre of science" that would work to make life more pleasant and safer, served to push a variety of technologies, such as electric lighting. This was coupled with increasing power of large corporations after 1900 and their ability to link their private and corporate fortunes with designing and marketing new products. By the 1920s electric lighting, however modest, was a standard feature in most urban American homes. After World War II marketing turned the collective American attention to a new generation of electric and gas devices, such as televisions, forced-air furnaces, and electric garbage disposals. By the next decade, as these devices become commonplace, marketing began pushing a new generation of exciting advances, such as air conditioning. Rose stressed that throughout, electric "corporate publicists were quick to connect the enhanced comfort and convenience of gas and electric appliances with ideas such as science, progress, or even democracy" (Rose 1995:3).

By 1900 teachers, architects, and home builders were all combining forces to instruct the urban bourgeois in the use of gas and electricity. Students were being taught the importance of bright light for the health of their eyes, while young women were being taught the benefits to digestion achieved through cooking foods on gas stoves (Rose 1995:8).

During the postwar years a variety of marketing tools and political forces converged to both encourage the use of gas and electricity and also to ensure that prices remained stable or declined. State regulators permitted utilities to secure returns only on invested capital, not labor and supplies — this encouraged capital-intensive technology and the

creation of new plants. As a result, mid-twentieth century production increased. Between 1950 and 1969, capacity at the nation's private utilities increased from 329 billion kilowatt-hours to 1,329 billion — an increase of more than 400% (Rose 1995:178). The number of electric customers increased from 27.5 million in 1950 to 62.5 million in 1969. Residential use of electricity increased by 600% during that same period. As Rose observes,

institutionalized behaviors and political arrangements had converged, encouraging Americans to build environments of light and heat that were spread across an immense landscape. Federal and state governments built highway networks that allowed Americans to live far from central cities. Government also financed construction of water and sewer systems extending into distant suburbs, all the while guaranteeing the mortgages of new residents. At the same time, electric and gas rates declined; engineers built larger and more efficient plants; regulators kept energy prices low, particularly prices for natural gas; and lengthy pipelines and electrical interchanges carried that energy through the continent (Rose 1995:200-201).

But after 1970 these arrangements began to collapse. Utility companies discovered that their ability — the ability of science — to drive unit costs ever lower was limited. Shortages of natural gas lead to inflationary pressures. And in turn politicians began to feel that deregulation would lead to lower prices and increased production — a theme still heard today. The consequences, Rose points out, are dramatically different, "vastly increased prices, continuing shortages, and rooms that were hotter in summer and chillier in winter" (Rose 1995:201). He comments that about the only thing that remained consistent was, "the continuing insistence of agents of diffusion that gas and electric appliances would enhance cleanliness, comfort, and convenience, especially for women" (Rose 1995:201).

Electrical Development in South Carolina

South Carolina was a very late player in the field of hydroelectric development. The first commercial use of electricity didn't occur until 1894 when water power was used in the Columbia Mills. Using water from the Columbia canal a powerhouse used two double horizontal turbines to drive generators, which were in turn connected to induction motors in the mill building (Harvey and Gardner 1997:3-4). By 1909 at least 200 mills in South Carolina were using electricity and 67 of these were powered at least in part by hydroelectric facilities.

Not only mills, but also cities were increasingly looking to electricity to make their futures brighter. In 1896 Columbia began to light its streets using power generated by the Columbia Water Power Company, which had rebuilt the Columbia Mills facility.⁹ In 1897 Anderson was the next city to light its streets. The Anderson Water, Light and Power Company built a hydroelectric plant at Portman Shoals on the Seneca River (Harvey and Gardner 1997:3-8).

In the early twentieth century, with support from the creator of the American Tobacco Company, the Catawba Power Company was transformed into the Southern Power Company, which eventually became Duke Power in 1905. By 1920 the Southern Power Company had completed a series of dams and generating stations along the Catawba and Wateree rivers (Harvey and Gardner 1997:3-9; State Department of Agriculture, Commerce, and Immigration 1907:157). They, along with a host of other private, investor-owned companies such as the Union Manufacturing and Power Company, the Saluda River Power Company, and the Savannah River Power Company, began selling their electricity to cities — and the march of science had begun.

⁹ Pogue reports that the earliest use may actually be a few years earlier. In 1892 the Columbia Electric Street Railway, Light & Power Company, predecessor to the Columbia Railway, Gas & Electric Company acquired the plant on the Columbia Canal originally developed by the State Penitentiary (Pogue 1964:50).

Electric power generation increased from 8 HP in 1890 to 32,162 HP in 1905 (State Department of Agriculture, Commerce, and Immigration 1907:471). By 1915 there were 64 firms providing 57 communities in 37 counties with electrical power. In Lexington County there was the Lexington Electric Light and Power Company in the town of Lexington and the Brodie Light and Power Company in the town of Leesville. In nearby Columbia electricity was provided by the Columbia Gas, Railway and Electric Company (Watson 1916:119-121).

Pogue provides a thorough account of the gradual development of electrical power in the Columbia area, under the umbrella of a corporate history for South Carolina Electric & Gas Company (Pogue 1965). Shortly after 1904 the Columbia Electric Street Railway, Light & Power Company began the gradual absorption of small local companies and in 1911 changed its name to the Columbia Railway, Gas & Electric Company. By 1925 the company had about 9,000 electric customers and 5,000 gas customers and in that year all of the company's subsidiaries — Columbia Gas Light Company, Parr Shoals Power Company, Public Service Company of South Carolina, Central Carolina Power Company, Richland Public Service Company, and Saluda Manufacturing Company — were consolidated. That same year control of the company passed to the Broad River Power Company.

The Broad River Power Company was incorporated in 1924 and was organized by W.S. Barstow & Company of New York. The company's stock was controlled by General Gas & Electric Corporation, a holding company for the Barstow interests. Barstow retained control of the company until 1929 when Associated Gas & Electric System purchased General Gas & Electric Corporation and, in 1937 the name of the Broad River Power Company was changed to South Carolina Electric & Gas Company (Pogue 1965:58). It is within this context that hydroelectric development of the Saluda took place.

The Development of the Saluda Dam Project

There are a number of different accounts of the Saluda Hydroelectric Project or Lake Murray, including Pogue (1965), Associated Gas and Electric

System (n.d.)¹⁰, General Gas & Electric Corporation (1929), and South Carolina Electric & Gas Company (n.d.). Pogue, of course, presents Lake Murray within the context of a corporate history, while the two Associated Gas and Electric Company pieces are clearly promotional and boosteristic. The SCE&G piece, put out by the Corporate Communications Department is factual, but oriented toward a generic public audience. Regardless, all of these present the same essential facts, often using the same phrases. There is, in addition, material associated with the original license application to the Federal Power Commission (now the Federal Energy Regulatory Commission or FERC) and available from FERC's internal archives, as well as other documents, such as Federal Power Commission (1932).

The Lexington Water Power Company was incorporated on July 1, 1903 by G.A. Guignard of Columbia. He acquired both lands and flowage rights on the Saluda at Dreher's Shoals and upstream for about 20 miles. The company was authorized to construct a dam at this site by the South Carolina legislature on February 22, 1904 (Stat. No. 367, pp. 657-658). On March 19, 1907 Guignard sold the lands and flowage rights and these passed through a variety of hands until 1911 when a syndicate formed as the South Carolina Power Company acquired the rights.

In 1923 the interests of the South Carolina Power Company were absorbed by the Columbia Railway, Gas & Electric Company and by 1924 the South Carolina Power Company was a subsidiary of W.S. Barstow Company. With the dissolution of the South Carolina Power Company its interests passed to the Broad River Power Company, which was controlled by General Gas & Electric Company, a Delaware corporation managed by the W.S. Barstow Management Association.

Meanwhile the Lexington Water Power Company, owned by G.A. Guignard, filed an application with the Federal Power Commission to construct a dam at Bear Creek, several miles up river from Dreher's Shoals on July 11, 1924, identified as Project No. 516. In turn, the South Carolina Power

¹⁰ This is reprinted in part by Bayne (1992).

Company applied for a permit to build a dam at Dreher's Shoals on September 13, 1924, identified as Project No. 536. This permit request, however, was withdrawn on December 21, 1925.

In early 1926 the Broad River Power Company filed for a permit to build a dam at Dreher's Shoals, identified as Project No. 694. This permit, however, was rejected by the FPC on July 15, 1926. Meanwhile, W.S. Murray, of the Murray and Flood Engineering Company purchased from Guignard the entire stock of the Lexington Water Power Authority for \$100,000, giving him control of the Bear Creek site. On May 26, 1926 Murray and Barstow entered into an agreement that provided 70% of the Lexington Water Power Company stock would go to General Gas & Electric Corporation with the profits being shared equally.

On October 4, 1926 a permit was issued to Lexington Water Power Company for the Bear Creek dam. On July 1, 1927 the company amended their permit request, specifying that the proposed dam would be constructed at the Dreher's Shoals site, several miles below the Bear Creek site and on July 8, 1927 Lexington Water Power Company was issued a licence for the project.

By early 1927 the news of the proposed dam was already well known to Columbia residents. A February 28, 1927 *Columbia Record* newspaper article was headlined, "Greatest Thing That Has Ever Come to Columbia, Says Leading Citizens With Regard to Power Co. Proposal." The article went on to exclaim that the proposed work was, "the most wonderful thing that has ever happened in the industrial history of the state." *The State* newspaper proclaimed that same day, "Mammoth Hydro-Electric Development to Rise on Saluda River Near Columbia."

And certainly it came at the right time. The economic stagnation of Columbia was palpable. The project would cost \$20 million and would employ 3,500 men, many from the local area. Visitors stepping off the Southern Railway trains in Columbia were greeted with the electric sign reading, "COLUMBIA, THE POWER CITY" (Moore 1993:337).

The newspapers even provided detailed directions:

The site for the vast power project at Dreher's Shoals in Lexington County will likely be the goal of many motorists today . . . the best road to the project is via Irmo. At Irmo a sharp turn to the left should be taken, this road being traveled about three-fourths of a mile and then a turn to the right, followed about two miles, will bring one to the Bush River Road, near a bridge. Turning sharply to the right down this road and following it about two miles takes the autoist by the Shuler house and thence on to the dam site ("Road Via Irmo Best to Dam Site," *The State*, February 2, 1927).

As Pogue points out, combining the two projects and building at the lower site resulted in a head of 183 feet against a combined head of 140 feet for the two smaller projects. While much of this legal and financial activity was taking place, the next phase was already being implemented by Columbia real estate agent T.C. Williams. Williams was charismatic and single handedly visited the thousands of families to "sell" the dam, obtaining purchase options on their property and making arrangements for surveys (Bayne 1975). At each house he took photographs for appraisal purposes. He also began correspondence regarding the 193 graveyards within the proposed floodpool (and even some at the edge). Most of the graves were eventually moved by Charlie Taylor, a Lexington funeral director under contract with Lexington Water Power Company (EAGLE Students 1988:13).

Acquiring the 1,100 parcels for the dam, spillway, and railroad spur line access was made all the more difficult by the fact that many properties had been in the family for generations. While there seems to have been little public acknowledgment of the anger or resentment felt by local farmers, years later it is vibrant in oral histories that recount the heartache of many who watched as their houses were slowly flooded (EAGLE Students 1988).

FIGURE NOT AVAILABLE

Figure 17. View of floodpool during logging (courtesy of SCE&G).

James Wessinger explained that his land was "property . . . handed down from generation to generation" and that "it sounded unbelievable to the average layperson that the area immediately above the dam, near St. Michael's Church would be covered with water" (EAGLE Students 1988:3).

Swansea Reentsjerna commented that the, "worst part . . . was uprooting our community of Red Knolls," while T.A. Henry told of the loss of Countsville (EAGLE Students 1988:6, 11). Other stories were essentially the same.

Acquisition began in May 1926 and by the end of the project options on 98,200.28 acres had been acquired, with 92,021.2 acres owned in fee simple. About 60,000 acres were acquired at the rate of \$15/acre, with the remaining acreage bought at an average price up to \$42/acre (Federal Power Commission 1932:31).¹¹ At the time there was some criticism that the prices paid by T.C. Williams were

above, not below, the fair market value and some argued that the land could have been acquired less expensively through condemnation. Williams and the Lexington Water Power Company argued that condemnation was a lengthy process with an uncertain outcome. They felt that offering a fair, or little inflated, price was better for the project. Nevertheless, at least a few tracts did go to condemnation. For example, T.H. Rawl argued his case up to the South Carolina Supreme Court, but without success (Graydon 1929).

With the acquisition of the necessary lands construction began March 1, 1927. Logging crews removed the timber from 44,666.2

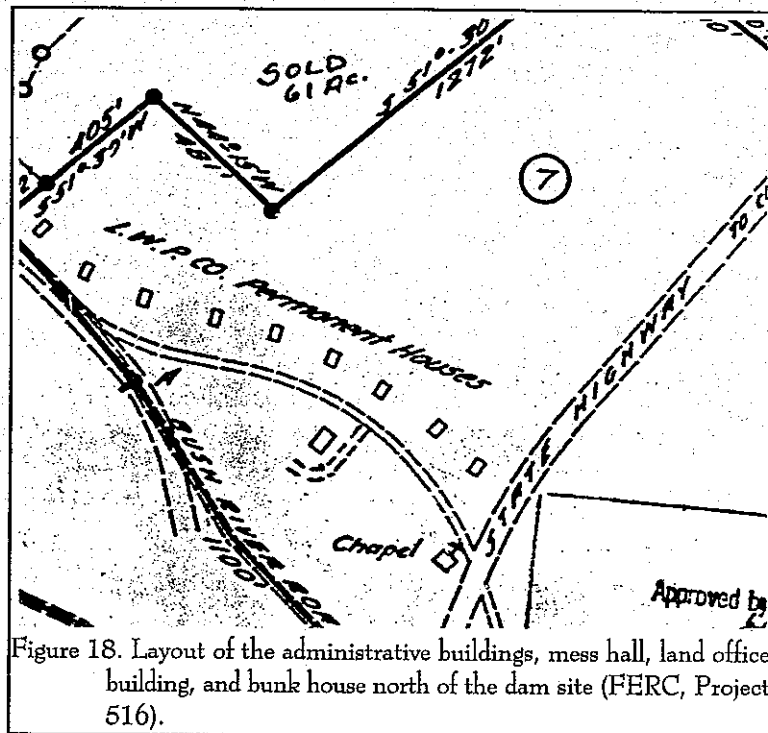


Figure 18. Layout of the administrative buildings, mess hall, land office building, and bunk house north of the dam site (FERC, Project 516).

¹¹ While this may seem low to us today, \$15/acre converted in 1992 dollars is about \$120/acre and \$42/acre is about \$333/acre. In addition, much of this land was either in forest or represented worn, eroded cropland. The prices were probably reasonable, although the attachment to the land was certainly beyond price.

acres, resulting in about 55 million board feet (Federal Power Commission 1932:47). Much of this timber was sold to contractors working on the dam, the remainder was either burned or wired to the ground to prevent it from floating as the basin was eventually flooded (Figure 17).

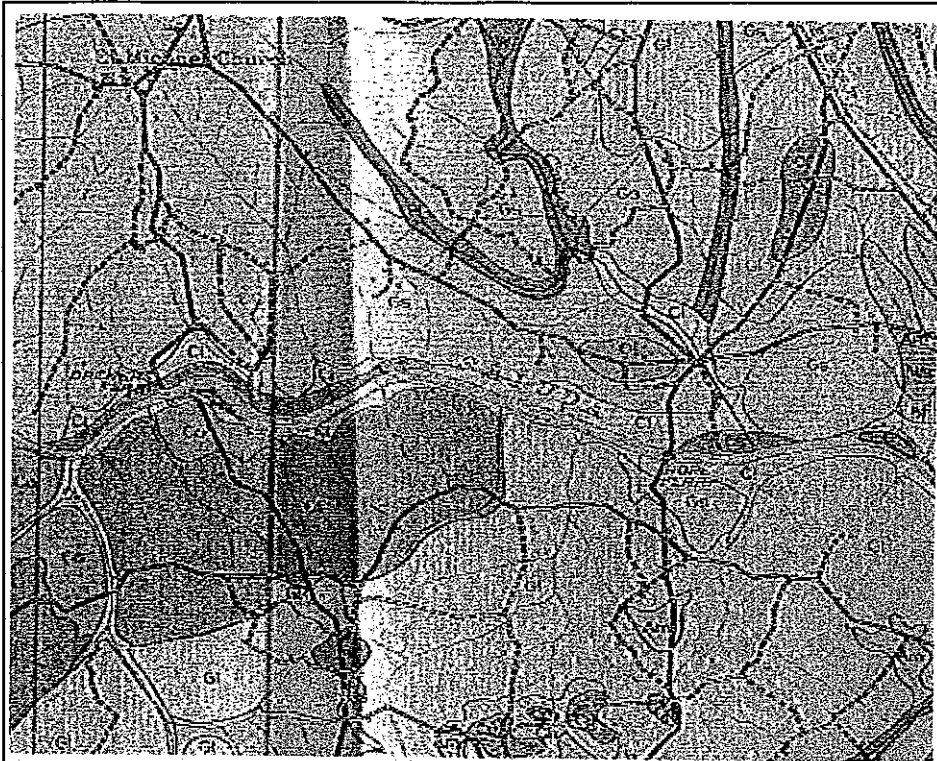


Figure 19. Portion of the 1922 Lexington County soil survey showing structures in the survey area.

Campsites for the workers were established in the immediate area. Pogue notes that the Arundel Corporation, contractor for the dam construction, built camps that accommodated about 1,500 workers. A village of nine structures and a church were built 0.5 mile north of the dam.¹² Figure 18 shows the layout of these structures. A hospital was situated about 0.5 mile northeast of the dam. The location of the major campsites, however, has not been identified in the historical research.

Of particular concern to this project are the locations of structures in the study tract. Figure 19 is a portion of the 1922 Soil Survey map of Lexington

¹² A view of these structures is provided in Associated Gas & Electric System n.d.:8 and additional views have been found in the Duncan, Kinard, Sanders and Tucker Families Album, 1928-1929, South Caroliniana Library. This is identified as archaeological site 38LX411.

County showing the area from Hope Ferry to Dreher Ferry (Shoals). There are two areas where structures are found. On the north side of the Saluda, off what is Bush River Road, is a farm road with four structures (two on each side of the farm road). On the south side of the Saluda River a road loops up crossing what would become the spillway and then crossing it again to the east. This road no longer exists, but at the time there were three structures located on it, two to the south and one to the north.

Far more useful, however, are the property maps made by

T.C. Williams and Lexington Water Power Company and submitted to the Federal Power Commission as part of their permit application. Unfortunately the only structures shown are those built by Lexington Water Power Company. The original farm houses in the construction area were apparently all completely removed. There is, however, one map showing the proposed dam which does provide some detail on pre-existing conditions.

Figure 20 shows the dam area. Adjacent to Bush River Road there is one structure — representing the complex shown in this area on the 1922 soil survey (Figure 19). No other structures are shown, suggesting that they may have been dilapidated, removed by this time, or perhaps were not dwellings. At the south end of the dam the map shows the location of the Yninger Cemetery, marked as "Graveyard."

Figure 21 shows the survey area after the completion of the dam construction. While this doesn't

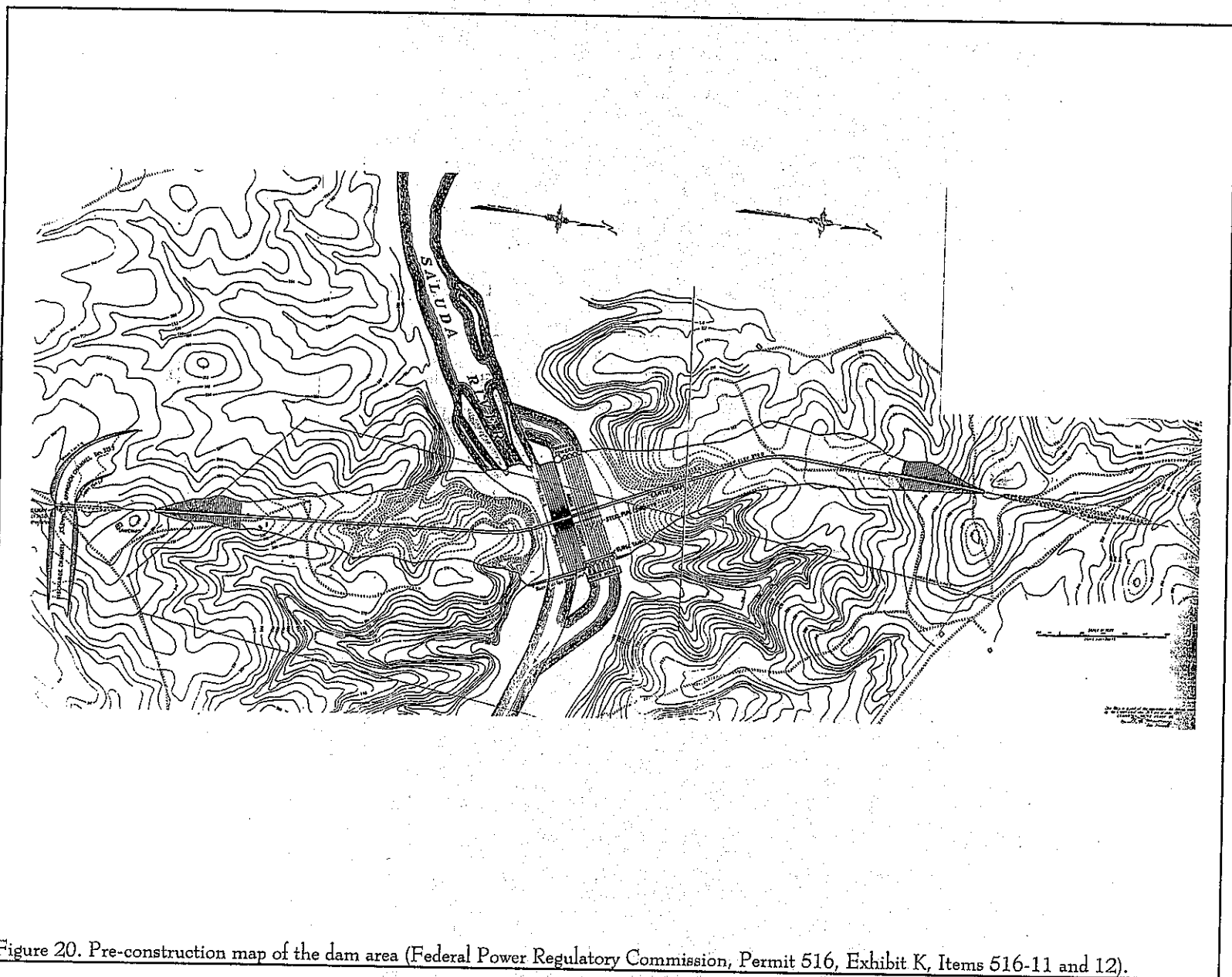


Figure 20. Pre-construction map of the dam area (Federal Power Regulatory Commission, Permit 516, Exhibit K, Items 516-11 and 12).

FIGURE NOT AVAILABLE

Figure 21. Land Atlas of the dam area, sheets 1 and 2 (Federal Power Regulatory Commission, Permit 516, Exhibit K-1).

PHOTO UNAVAILABLE

Figure 22. Temporary bridge under construction. To the north is the lumber storage yard and rail spur (courtesy of SCE&G).

provide information on pre-existing structures, it does indicate landowners. On the north side of the Saluda the project was contained entirely to the land of Mrs. Annie C. Schuler, identified as Option 1 and accounting for 546.3 acres. It is likely that the structures shown on the 1922 soil map and on the pre-construction plan were the Schuler farm. This plan shows the "Temporary Detour Bridge," as well as the powerhouse, discharge channel (which is now the flow of the river), and substation. Also shown are the Lexington Water Power Co. Temporary Buildings at the northwest edge of the tract. Further to the east, set back from Bush River Road, was the hospital.

The south side of the river consisted of 10 tracts. The largest, comprising the center portion of the survey area was 152.7 acres owned by Charlie H. Drafts (Option 467, Tract 5). Small portions of land along the spillway to the east were acquired from Mrs. Corrie D. Meetze (Option 489, Tract 2), D.C. Drafts (Option 444, Tract 3), and J.M.

and Emma Drafts (Option 488, Tract 4). Land under and east of the dam included the property of Mary E. Corley (Option 379, Tract 7), S. Frank Corley (Option 466, Tract 6), Mrs. T.L. and C.C. Harmon (Option 3, Tract 13), Charlie E. Gable (Option 171, Tract 9), G. Maxie Gable (Option 173, Tract 8 and Option 173, Tract 12). Comparing this portion of the plan to the 1922 soil map suggests that the structure on the north side of the road would have been that of Charlie H. Drafts (Tract 5), while the two on the south likely belonged to G. Maxie Gable (Tract 8) and Charlie E. Gable (Tract 9). The Yninger Cemetery was located on the lands of G. Maxie Gable (Tract 12).

There are numerous accounts of the actual construction. All focus on the monumental undertaking and the speed with which the construction was done.

One of the first construction operations was to build the 3 mile railroad spur, connecting the dam site with the Columbia, Newberry & Laurens Railroad in Irmo. This work was begun on September 12 and the line was operational by November 25, 1927. A variety

PHOTO UNAVAILABLE

Figure 23. View of the temporary bridge taken from on top of the dam in 1930 (courtesy of SCE&G).

PHOTO UNAVAILABLE

Figure 24. View of the penstock construction on January 3, 1929 looking east, into the survey area. Note the extensive clearing and ground disturbance from construction. (Duncan, Kinard, Sanders, and Tucker Family Album, 1928-1929; Courtesy of South Caroliniana Library, University of South Carolina).

photographs reveal a large stockyard of lumber, as well as the spur railroad line. The area is cleared and erosion was likely significant.

A temporary dam, nearly 0.7 mile long, was built along the north bank of the Saluda to prevent flooding of the eventual penstock area during construction. The soil for this dam came from the immediate project area. Then the penstock area was excavated down to about 8 feet below bed rock. The four penstocks, which would eventually carry water

of photographs are available, showing the extraordinary amount of land disturbance caused by the construction methods of the early twentieth century.

from the lake to the turbines, were then constructed. Each was 16 feet in diameter. Also constructed was an

A temporary bridge was constructed across the Saluda River, downstream from the construction. This wooden bridge was set on a series of four lumber and stone piles in the Saluda, which remain today. The road and bridge allowed residents to move freely back and forth, replacing the "Steel Bridge" at Wises Ferry that would ultimately be covered by the waters of Lake Murray. On the main dam property north of this temporary bridge

PHOTO UNAVAILABLE

Figure 25. View of dam construction looking north. In the center is the segregation pool, which formed the center clay core of the dam (courtesy of SCE&G).



PHOTO UNAVAILABLE

Figure 26. View east of the north bank of the Saluda, east of the dam in 1930. Note the extensive construction disturbance, including complete denuding of the floodplain area (courtesy of SCE&G).

arched conduit, with a diameter of 48 feet. This would serve to divert the river during the subsequent dam construction and, eventually, would be used in an expansion of the hydroelectric powerhouse. The literature of the period pointed out that this arched conduit was 20 feet greater than the diameter of "each of the Holland vehicular tubes connecting New York with New Jersey and six automobiles could be operated abreast through its course" (Associated Gas & Electric System n.d.:15).

Simultaneously the water intake towers were also constructed. Each was 30 feet in diameter and 223 feet in height. A fifth tower, to serve the arch conduit,

was also constructed with a 60 foot diameter. At the bottom of the towers trash racks 75 feet in height were installed to prevent debris from being brought into the pipes. Inside each of the four towers are two Broome roller gates for cutting off the flow of water. The larger intake tower, for the arched conduit, has six Broome gates.

Once the water could be diverted from the river bed through the arched conduit, construction began on the dam itself. The area under the dam was

extensively grubbed, with the middle third of the dam footprint being graded down to bedrock. The center of the dam had a clay core, set by use of segregation pool. Clay and soil was dumped on both sides of this



PHOTO UNAVAILABLE

Figure 27. View of the Saluda Hydroelectric powerhouse under construction, looking northeast. At the right hand side is the substation lot (courtesy of SCE&G).

PHOTO UNAVAILABLE

Figure 28. View of the completed Saluda Hydroelectric project, ca. 1945. The construction area is being re-vegetated. The arched conduit is still clearly visible to the left of the powerhouse. Also visible on the right side of the photograph is the brick substation (courtesy of SCE&G).

very dense, dry clay" (Associated Gas & Electric System n.d.:21).

The 11,000,000 cubic yards of earth fill needed for the dam came entirely from the dam site. Borrow areas included the penstock area, the spillway (which followed a creek, but was excavated to bedrock), and a variety of additional areas in close proximity to the dam.

The dam's upstream face was covered with rip rap, while the downstream face was covered in grass. The spillway to

segregation pool and was sprayed by "five scows" using the south was equipped with four nozzles discharging 750 gallons of water per minute at a pressure of about 125 psi. Directed against the earth banks on both sides, this spray washed the fine materials down into the segregation pond, where they settled out. Gradually the segregation pond was built up, forming the center clay core of the dam. Both unwashed and washed soils formed the upstream and downstream sides of the dam. The theory of this type of dam construction was that the core, through time, "becomes like hardened cement or

PHOTO UNAVAILABLE

Figure 29. Airplane view of the Saluda dam and powerhouse from about 1944. The arched conduit is barely visible, having been extended when rip rap was added (courtesy of SCE&G).

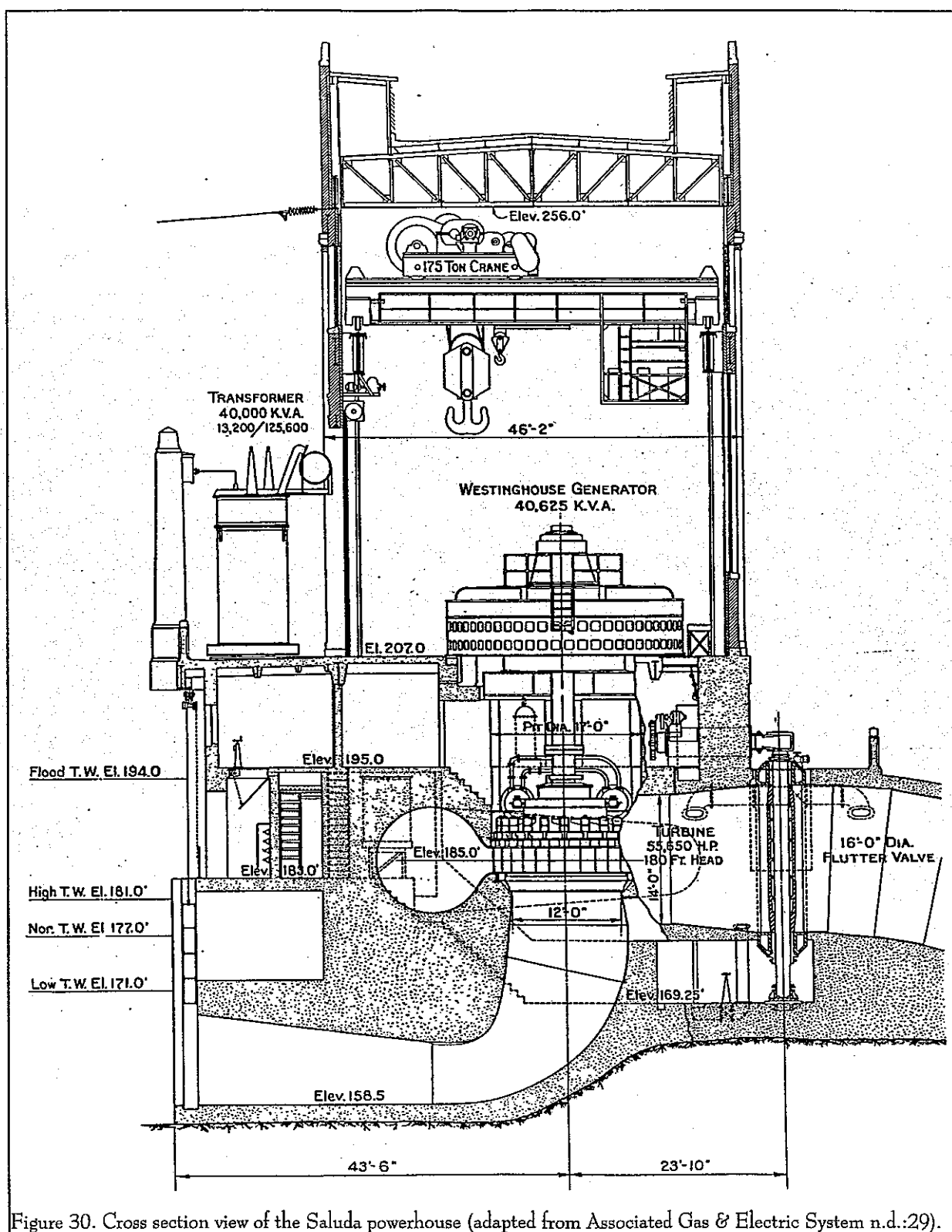


Figure 30. Cross section view of the Saluda powerhouse (adapted from Associated Gas & Electric System n.d.:29).

Tainter gates, each 37 feet six inches in length and 25 feet in height. The power station, 57 feet wide, 250 feet long, and 100 feet tall, was built of concrete, steel, and brick. It was equipped with four 55,650 HP turbines. Two surge tanks, 38 feet in diameter and 219 feet tall, were constructed behind the dam, providing a surge protection of 16,000,000 gallons. The substation, built to match the powerhouse, was situated about 1,000 feet from the powerhouse.

The general contractor for the dam work, responsible for clearing work, the construction of the spillway, construction of the power plant structures, installation of machinery, construction of all temporary and permanent houses, construction of the intake structures, and development of a mosquito control program was W.S. Barstow & Company of New York. The Arundel Corporation of Baltimore was responsible for the dam construction. Erecting the intake towers from elevation 211 was the responsibility of McDonald-Spencer Slipform Company, while fabrication and erection of the steel penstocks was handled by The Reeves Brothers Company of Birmingham. The surge tank construction was contracted to Chicago Bridge and Iron Works.

The Supervisory Engineers were Murray & Flood of New York with A.P. Campbell serving as the Chief Construction Engineer, Arthur R. Wellwood was the resident engineer on the job, and N.D. Urquhart was the Superintendent of Construction in the field. The Consulting Hydraulic Engineer was Albert S. Crane, while the design of the hydraulic works was conducted by The J.G. White Engineering Corporation of New York. The first power was generated by the Saluda Hydroelectric

plant on December 1, 1930. Since Lexington Water Power Company was solely a production company and owned no transmission lines, this power was sold to Duke Power (Pogue 1964:101).

Boosterism was encountered throughout the project. Signs were erected to promote the project and \$4,536.57 was spent to take "progress photographs" of the dam — an amount which the FPC found reasonable, although they did disallow \$1,939.57 for "entertainment of State and corporate officials" (Federal Power Commission 1932:87-90).

By the late 1930s some concern developed regarding the stability of the dam and the water level was reduced from 362 feet to 350 feet in 1936 (Pogue 1964:101). Swannea Reentsjerna remarked that, "when the wind blew real hard, it would blow water and you had to use your windshield wipers to go across the dam" (EAGLE Students 1988:7). While the water elevation was allowed to increase to 355 feet in 1937, plans were underway to not only increase the spillway, but also to raise the crest of the dam to an elevation of 375 feet. By 1942 the FPC directed that additional spillway capacity be created to the south of the existing gates, that a "suitable discharge channel" be created, and that "the stability factor or margin of safety of the earthen



FIGURE NOT AVAILABLE

Figure 31. Billboard erected by the Lexington Water Power Authority (courtesy SCE&G).



FIGURE NOT AVAILABLE

Figure 32. View of spillway gate construction, ca. 1945. The Yninger Cemetery is shown at the far right of the photograph (courtesy of SCE&G).

dam . . . be increased by the addition of material on the downstream slope so that said slope will be at a smaller angle with the horizontal" (Wingfield and Henkel 1942:238). It was during this work that Swannea Reentsjerna also remembers, "during that time you couldn't use the dam. So they used the terraces on the side of the dam for the road. One terrace was used to go and one was used to come" (EAGLE Students 1988:7). A photograph showing the construction of the additional Tainter Gates (Figure 32) is of special interest since it also shows the Yninger Cemetery. What appear to be eight stones are visible within a square formed by vegetation, as though growing up along a fence line (Figure 33).



FIGURE NOT AVAILABLE

Figure 33. Close-up of the Yninger Cemetery shown in Figure 32.

In 1943 Lexington Water Power Company merged with the South Carolina Electric and Gas Company, originally incorporated as the Broad River Power Company in 1924. By 1942, just prior to the merger, the rates of SCE&G were described as being, "of relatively simple form designed to promote liberal use through low increment charges for increased consumption" (Wingfield and Henkel 1942:75). In other words, like other utilities during this period,

SCE&G sought to encourage the use of electricity. By combining a variety of "labor-saving" devices with cheap power, SCE&G clearly operated in the same manner as other investor-owned utilities.

FIGURE NOT AVAILABLE

Figure 34. View of the completed McMeekin Station, May 8, 1961. Note how the ridge to the east continues to be cut away (courtesy of SCE&G).

Continued Expansion

By 1952 studies revealed that Columbia and other portions of the SCE&G service area would need additional power. As a result, the McMeekin steam-electric generating plant was designed for construction adjacent to the existing hydroelectric facility at Lake Murray.

Construction began in 1956, this time with a work crew of about 800. About 218,000 cubic yards were excavated in the immediate plant site area, while an additional 202,000 cubic yards were excavated for the one ash disposal basin constructed at that time.

The main building, on a concrete

offices, locker rooms, labs, storerooms, and meeting rooms.

The station was named for Silas Calhoun McMeekin, who is perhaps best remembered for his

slab foundation, has structural steel framing, corrugated asbestos siding, corrugated glass, aluminum louvers, and a flat roof. An interesting "advancement" for the time was to leave part of the boilers, superheaters, air heaters, and water storage tanks unenclosed outside — reducing ventilating problems. In addition, the use of controlled circulation boilers allowed a significant reduction in the size of the building. Connected to the west facade of the plant itself is a two-story brick building that contains

FIGURE NOT AVAILABLE

Figure 35. Close-up view of the McMeekin Station from the dam, ca. 1970 (courtesy of SCE&G).

fight against the creation of Santee Cooper and the power cooperatives and his view that the power cooperatives were "national socialism and communism" in America (Pogue 1964:121). Full page ads in the *New York Times* warned that the creation of the power cooperatives would not only waste \$9,000,000 in tax dollars; but would also serve to destroy SCE&G (Pogue 1964:123). Of course, neither happened and while this may be viewed as little more than a footnote in history, it does typify the attitudes of many Americans in the 1950s.

At the time of its construction, the FPC found the McMeekin Station to rank number one in efficiency for 1958. The plant has continued to be updated, most particularly with the addition of Unit 1 and 2 Bag Houses (for control of particulates) in 1980.

In 1971 the Saluda Hydroelectric facility was expanded by the addition of a fifth turbine and generator using the largest tower and the arched concrete conduit. This fifth generator can generate more than twice as much electricity as any one of the plant's original four turbines.

As an active industrial site construction and various modifications have continued to take place. In

the early 1990s the original switching station building was demolished and replaced with a modern concrete structure. The only description of the original building we have identified comes from the early 1940s. Like the powerhouse itself, the switching building was constructed of brick, steel, and concrete, using a similar bonding pattern and detailing as the powerhouse. It housed the,

remote controls for outdoor high tension oil circuit breakers, switchboards, meter equipment, supervisory system, carrier telephone system, storage batteries and charging equipment, and accessory equipment (Wingfield and Henkel 1942:241).

Most recently, a portion of the original spur line which ran from the Columbia, Newberry & Laurens Railroad in Irmo into the Saluda facility has been removed to allow the construction of a new access road. Likewise, throughout the history of the facility dirt roads have been created, used, and abandoned. The original roads developed to route traffic through the property during the dam construction are only vaguely visible in certain areas. Bush River Road was straightened, probably in the 1940s (although no specific research has been conducted on this work), and a remnant portion of the original dirt road remains on the SCE&G property.

An Overview of Construction Activities

This discussion has provided a general idea of the extensive work which took place on the survey tract.

Prior to the work most of the survey area was in forest, although several fields with active cultivation

FIGURE NOT AVAILABLE

Figure 36. Expansion of the Saluda Hydroelectric plant ca. 1971 (courtesy of SCE&G).

FIGURE NOT AVAILABLE

Figure 37. Aerial view of the dam complex ca. 1930 (adapted from Associated Gas and Electric System n.d.).

was present. There is good evidence that much of the area (including those areas no longer cultivated) were heavily eroded. Sheet erosion and gulying were common over much of the area. This erosion was likely encouraged by the initial clearing conducted for the dam construction. Even where construction was not taking place, there was clearing for the stockpiling of construction materials.

A network of new roads and railroad spurs were constructed throughout the facility. All of the roads were dirt, which also increased erosion.

Many areas around the dam served as borrow pits. Soil was removed for the construction of the dam, as well as for use on roads and bridge approaches. Rock was removed not only for the dam covering, but also for use in concrete.

There is an aerial photograph taken of the dam shortly after its completion. This illustration, while not particularly clear, reveals much of the damage to the landscape, especially in the immediate vicinity of the dam and along the immediate floodplain areas. There are numerous areas which were clear cut. Some are beginning to grow back up in second growth, but many others are still plainly visible in the photograph.

Even more revealing — and of higher quality — is the 1943 USDA aerial photograph of the dam location. Although taken more than a decade after the construction of the dam, it reveals that much of the area was still deeply scarred.

None of the Lexington Water Power Company temporary buildings shown in Figure 21 were still standing, although a new office building had been erected. The hospital was likewise removed. The area of these original buildings appears deeply scarred and partially terraced. What is today a wetland area in this vicinity is shown only as dark, wet soil with no cover, although a drainage ditch runs off to the southeast (likely representing an effort to drain this area). There is no evidence of the farm which existed on the south side of Broad River Road.

Although much of the temporary Saluda River Bridge road is still in place and being used, the portion

in the floodplain had been abandoned. The bridge itself is already gone, likely having been intentionally removed with the completion of the project.

There remained several areas of cultivation on the north side of the Saluda, primarily in the area at the east edge of the survey tract. Terracing of the fields is also visible and was a feature likely made necessary by the slopes in this area. Terracing, even absent any erosion, would have significantly affected the integrity of any archaeological sites in the area. Along the north bank of the Saluda, at the eastern edge of the project area, there is a pasture area, although the dark soils suggest that the area was routinely wet. This pasture opens into cultivated fields only east of the project area, where the soils are apparently higher and better drained.

Inland from the river there are remains of the gridded road pattern set out around the stockpiled construction materials. In this area there is second growth forest, except in the transmission easement which crosses through this area.

On the south side of the Saluda we see many of the same kinds of effects. Adjacent to the dam there is heavily scarred ground which has been terraced. Although the ash ponds are not yet part of the landscape (they came with the creation of the McMeekin plant), there is extensive disturbance along the spillway. These areas represent borrow pits used in the construction of the dam (as does the spillway itself).

The temporary road can still be seen crossing the spillway and looping its way back to SC 6, today forming what is known as Old Rapids Road. The portion of the original road within the dam site is still present, although none of the farm buildings exist. The portion of this road outside the dam complex is today called Bent Ridge Road.

There is a little floodplain pasture area west of the temporary bridge on the south side of the Saluda. Today this is wetland.

This aerial also reveals that the damage wasn't limited to the dam complex. To the south, around the lake edge, there is evidence of extensive clear cutting and borrow activity. The same can be seen northwest of



Figure 38. Dam complex and vicinity in 1943 (USDA, ASX-9C-69).

the dam, at the lake edge. All of this may be the result of additional work conducted on the dam in the 1930s. The image also reveals that the Lexington Water Power Company structures northwest of the dam, including the chapel, administrative building, and nine houses, are still all present and seem well cared for. Apparently plant personnel lived in this "village" for a number of years.

METHODS

Identification of the Survey Area

As previously discussed, there was good evidence that a considerable portion of the 550 acre Saluda Dam complex had been extensively affected by previous activities.

Initially agricultural activities resulted in extensive sheet erosion and, in some areas, gullyng. This is clearly revealed by period erosion survey maps and is probably reflected in the belief that the \$15/acre was too high a price for the lands acquired.

Subsequently, the construction of the dam resulted in use of a large portion of the tract, especially around the dam and in the spillway, for borrow. This is revealed not only by the modern soil survey, but also by a variety of period photographs, which show the area being clear cut and actively mined. Other portions of the survey tract were also damaged, either by construction of the railroad spurs and roads or by use of areas for the stockpiling of construction materials. The photographic history of the dam construction reveals that there was virtually no effect directed at minimizing the affects of the construction. The goal was single minded — to construct the dam as quickly and as economically as possible.

The continued operation of the Saluda Hydroelectric and McMeekin Fossil Fuel plants have also served to affect the landscape. There have been a series of additional construction activities since the completion of the dam. A variety of pipelines, overhead transmission lines, and roads have been constructed and maintained. A large portion of the tract has been devoted to ash settling ponds and other industrial activities. And finally, the area has been logged and replanted on several occasions.

All of these activities have resulted in massive land alteration. We have overlaid these variety activities and eliminated those areas which appear to have been

most significantly affected. In general, this area conforms to the area shown on the modern soil map as borrow and to the areas discussed as disturbed in the previous section. Today, however, this area is far more than borrow, since it also contains additional structures and industrial sites.

There were also some fringe areas where no survey was undertaken because of the steep slopes. Reference to the following figures will reveal that, in general, we surveyed all areas regardless of slope. However, when these steeply sloping areas (in excess of 15% slope) were found adjacent to disturbed areas, they were excluded from investigation. We believed that the steep slopes, in conjunction with the extensive industrial activities which took place in close proximity, dramatically reduced the potential for discovery of intact archaeological deposits.

All of these eliminated areas were examined in one of two ways. Those areas with the most intensive damage, such as around the settlement ponds and ash stockpiles, were simply driven and there was no effort to conduct any further survey. There were a few areas, however, where the disturbance, while historically documented, was not immediately evident on topographic maps. In these areas a pedestrian survey was conducted. In every case we very quickly ran into push piles and other evidence of disturbed terrain which would not be shown on topographic maps generated from aerial photographs using contour intervals of two feet. Occasional shovel tests were conducted and we consistently found disturbed soils, generally red clay (often with abundant rock) immediately below a very shallow (0.1 foot) recent A horizon.

In addition to extensive areas of disturbance, the survey tract contains very narrow margins of floodzone soil. Because these areas are so narrow, it seems unlikely that they would have been favored as areas of prehistoric occupation. There is no evidence that they were used historically. In addition, a careful

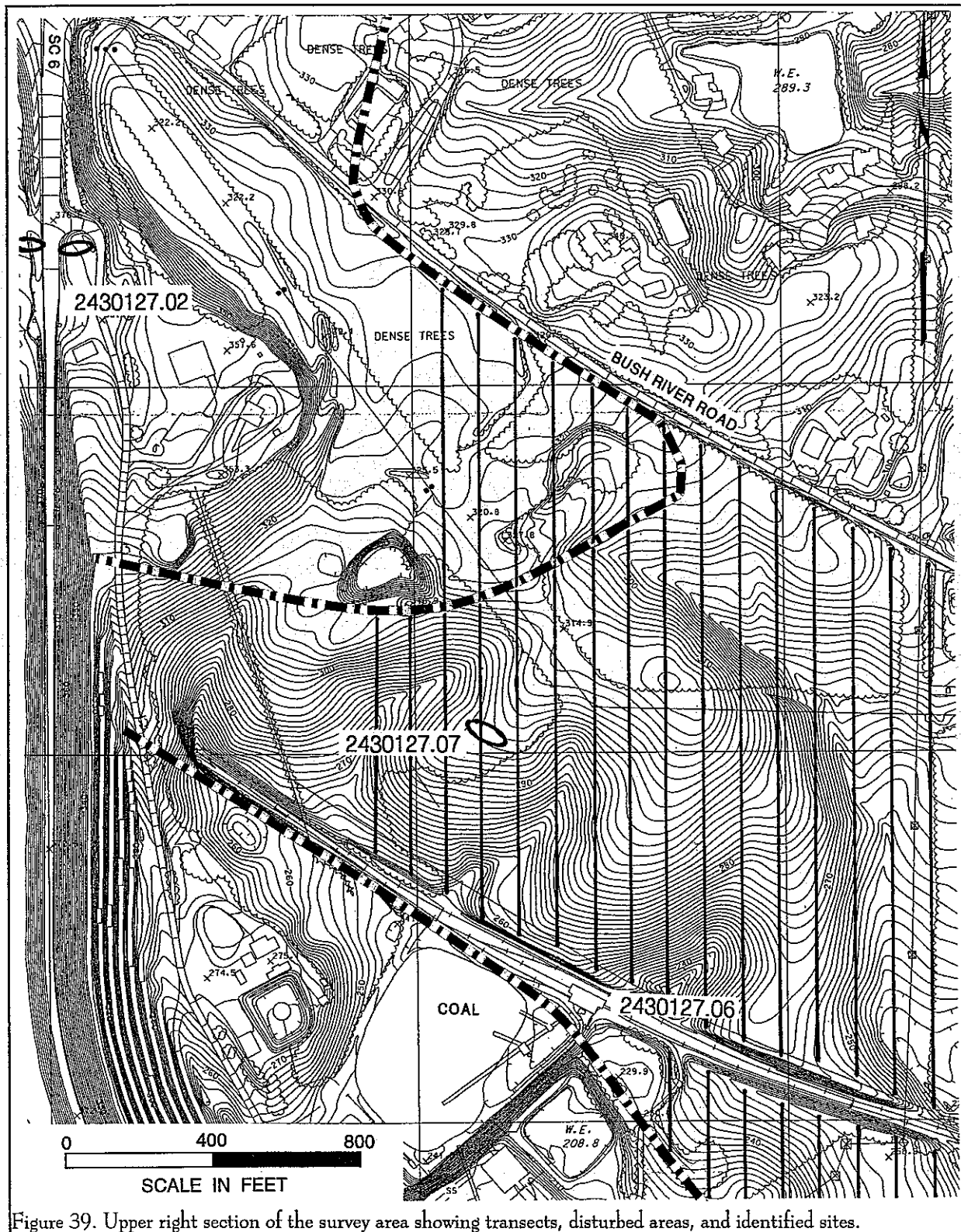


Figure 39. Upper right section of the survey area showing transects, disturbed areas, and identified sites.

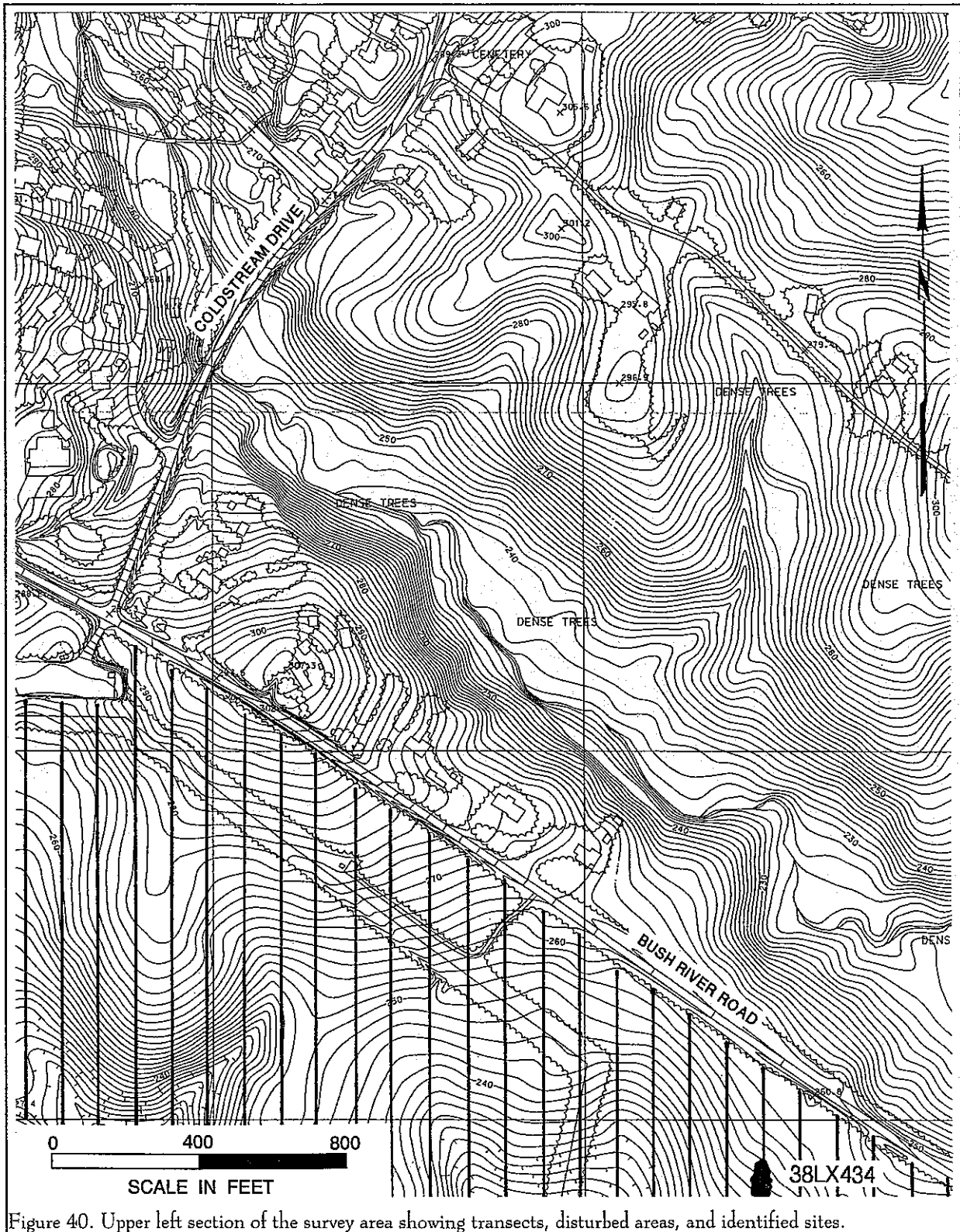


Figure 40. Upper left section of the survey area showing transects, disturbed areas, and identified sites.

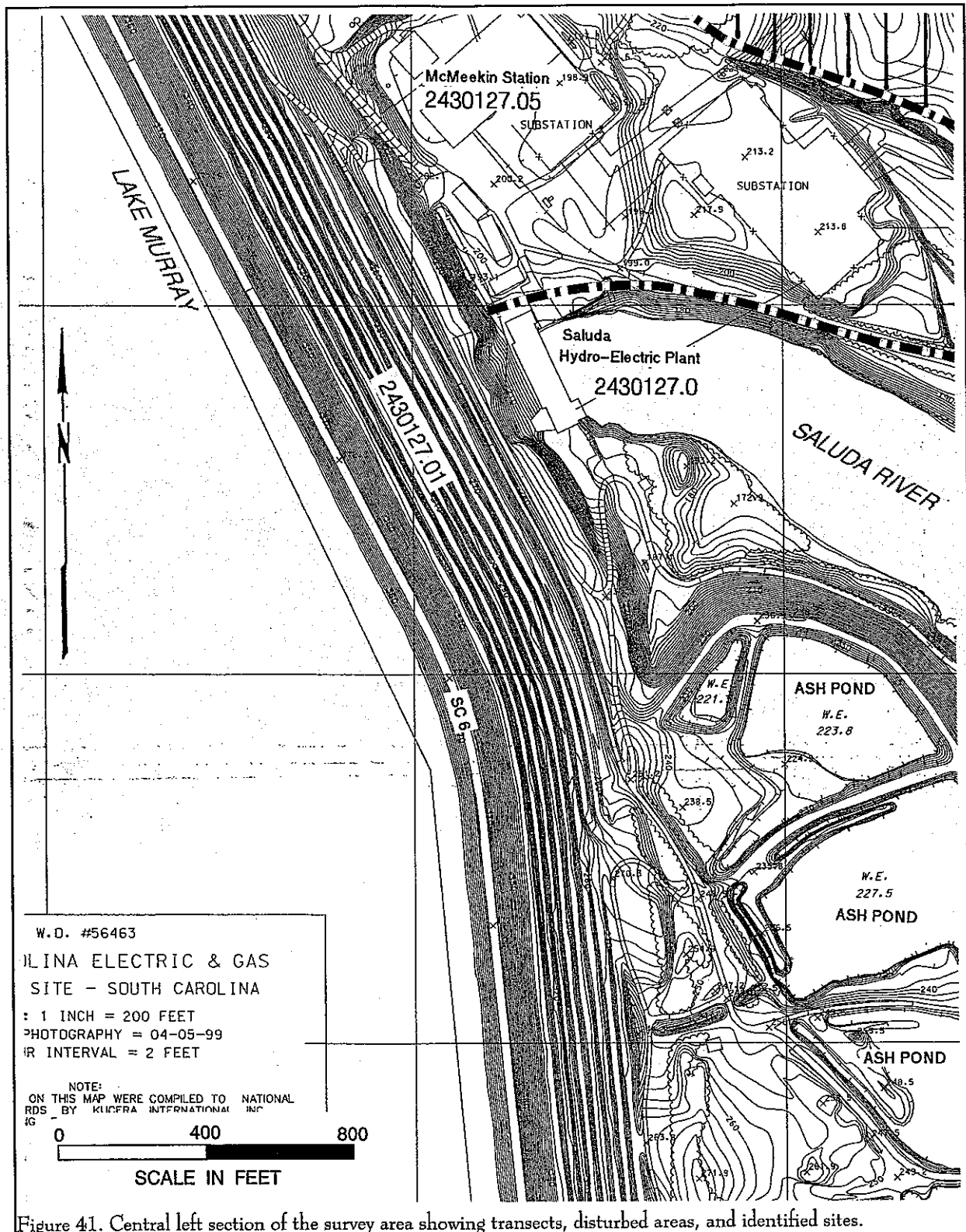


Figure 41. Central left section of the survey area showing transects, disturbed areas, and identified sites.

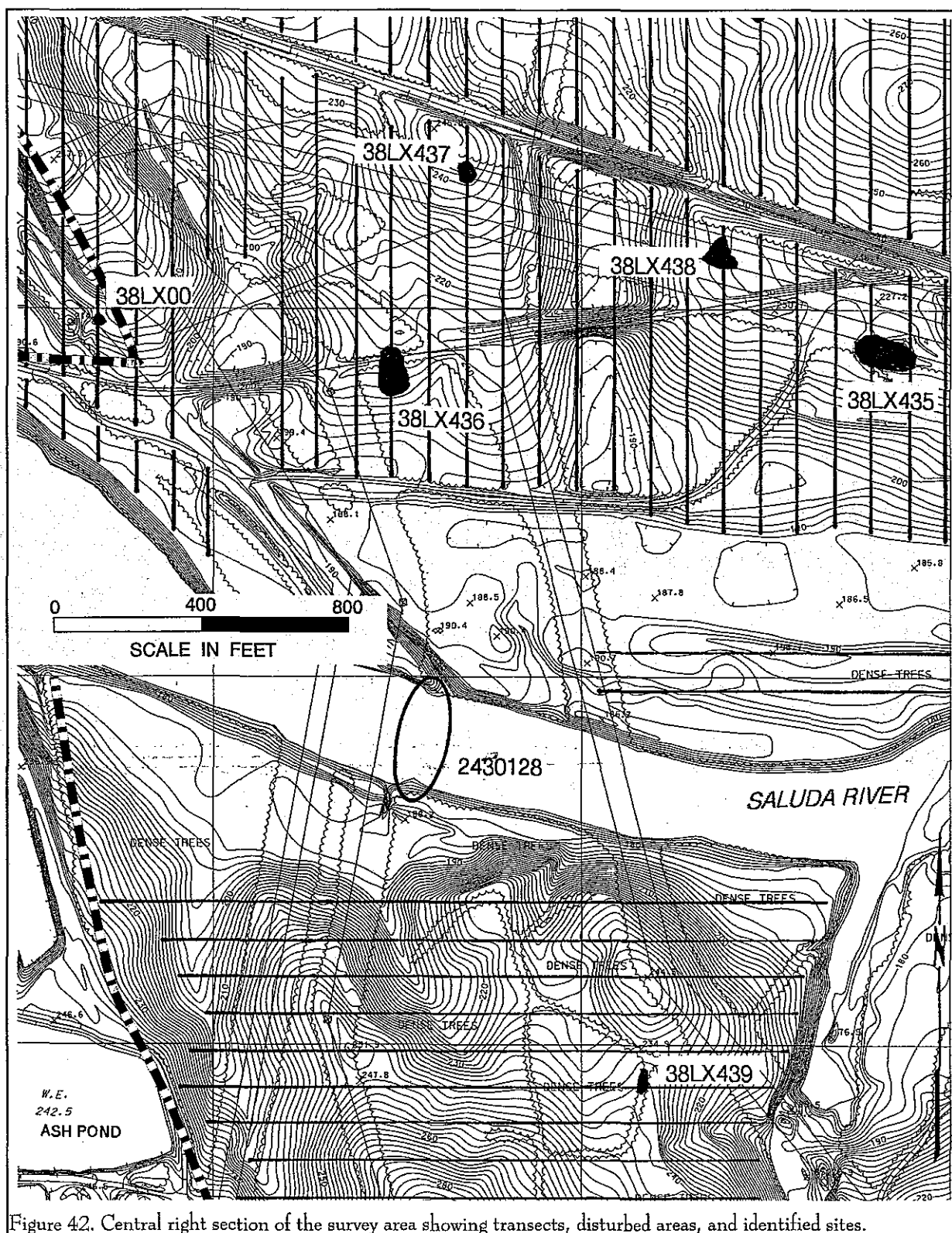


Figure 42. Central right section of the survey area showing transects, disturbed areas, and identified sites.

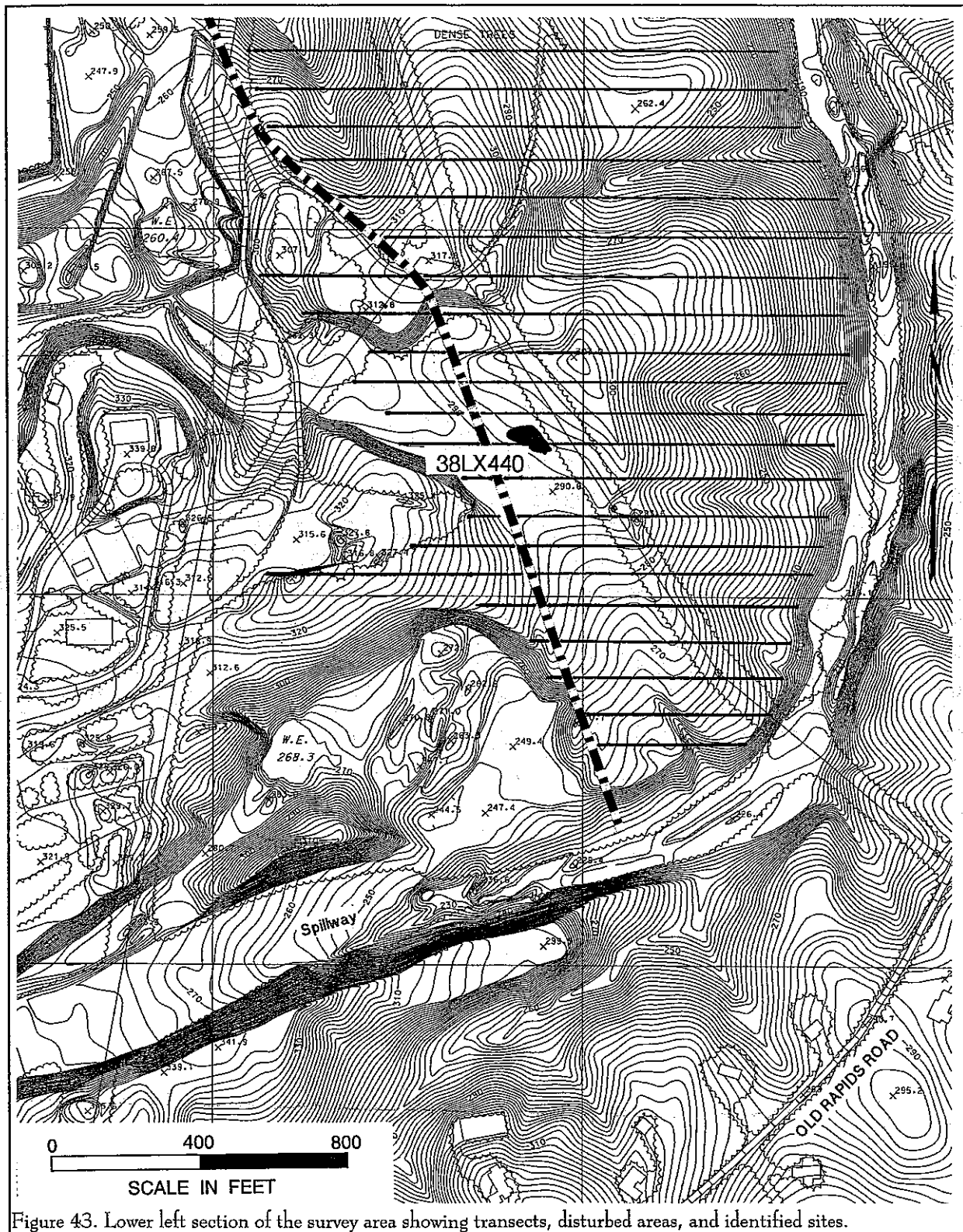


Figure 43. Lower left section of the survey area showing transects, disturbed areas, and identified sites.

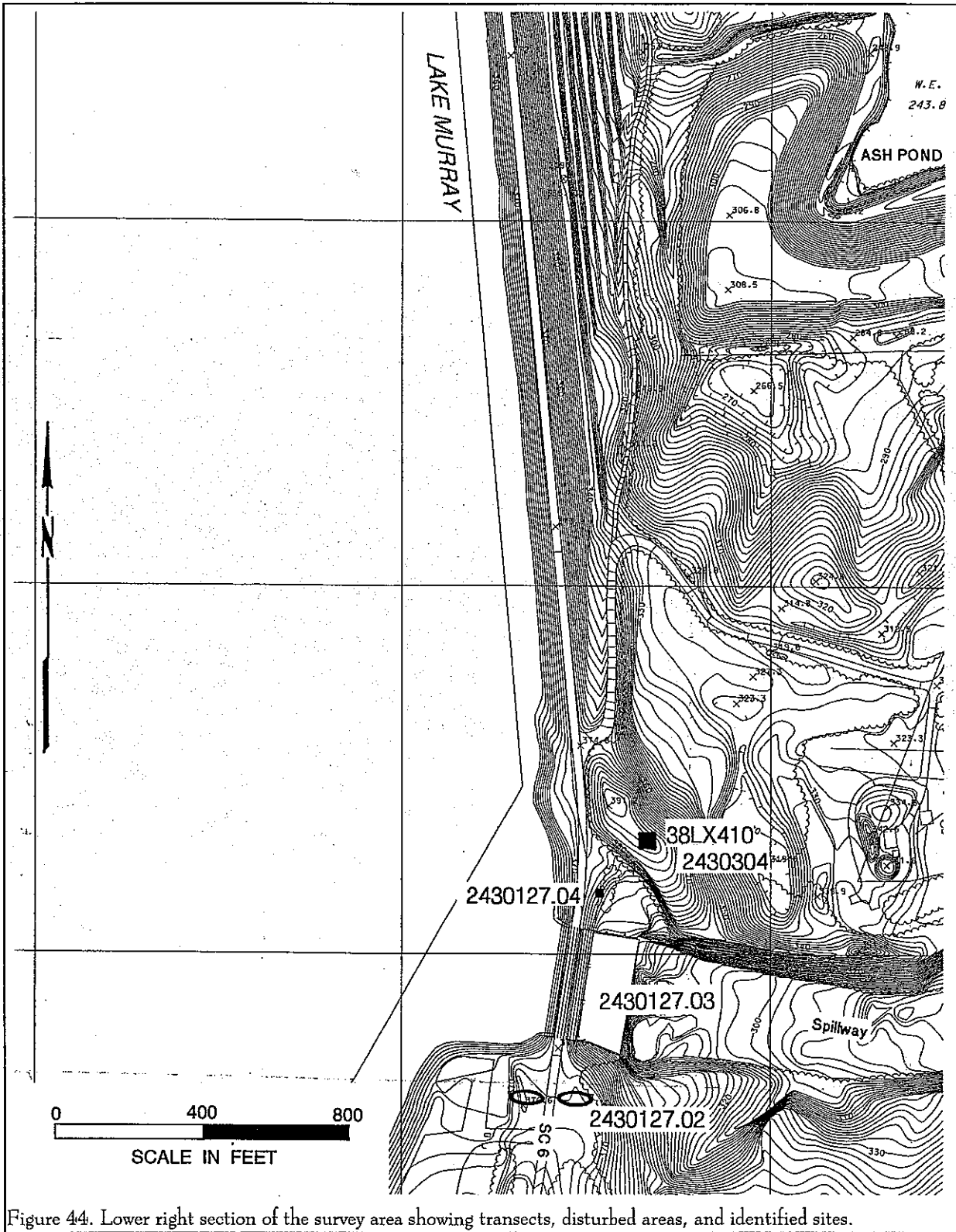


Figure 44. Lower right section of the survey area showing transects, disturbed areas, and identified sites.

review of the project plans revealed that no activity would be taking place in these floodplains. There was one location where we identified a narrow levee. This one area was subjected to shovel testing (to depths of approximately 2.2 feet) since it presented a setting similar (albeit far more narrow) to those downstream which had been used by prehistoric groups. The remaining portions of the floodplain were not surveyed.

These eliminated areas are shown in Figures 39-44. The elimination of the disturbed and floodplain areas left 250 acres for the survey and the methods used for that survey are described below.

Archaeological Field Methods

The initially proposed field techniques involved the placement of shovel tests at 100 foot intervals along transects spaced 100 feet apart. All soil would be screened through $\frac{1}{4}$ inch mesh, with each test numbered sequentially by transect. Each test would measure about 1 foot square and would normally be taken to a depth of at least 2 feet or until clay subsoil was encountered. All cultural remains would be collected, except for mortar and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered. A total of 1,191 shovel tests were excavated on transects.

Should sites (defined by the presence of two or more artifacts from either surface survey or shovel tests within a 25 foot area) be identified, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. These tests would be placed at 25 to 50 foot intervals in a simple cruciform pattern until two consecutive negative shovel tests were encountered. The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigators.

A series of 18 transects were established running due south from the northern boundary of the survey parcel (Bush River Road) and numbered from west to east (with the first transect, added later, designated by the letter A). These transects all stopped

at the railroad tracks. The southern quarter of this area had been logged prior to the survey, resulting in open, thin woods and surface visibility of about 30 to 50%. Elsewhere the vegetation was thicker, with the densest areas in the one small wetland (dry at the time of the survey) and the several ravines. The topography in this area was extensively rolling with very few level spaces. Throughout the shovel tests revealed red clay subsoil within 0.3 foot of the surface, indicating extensive loss of soil (up to 0.4 foot in most areas).

The railroad tracks that formed the southern boundary of these transects also served as the north boundary for the second series of 34 transects. These transects were extended to the edge of the floodplain, to the edge of the river, or to the edge of the documented borrow pit between this area and the river. These transects went through an area of extensive overhead transmission lines, so much of the area had been clear cut, although the easements were often grown up in brambles and other noxious vegetation. The forests were generally open on the higher ground and became more dense toward the floodplain. There were several very steep and heavily eroded gullies in this area, but they, too, were incorporated in the survey. Several small wetlands were found in this area, although they were in general dry and identifiable only by deeper soils.

There were also a series of six transects which were laid out to the north, in order to more fully investigate what was thought to be intact soils south of the large excluded borrow pit area. The southern half of these transects were generally typical of those elsewhere on the property, although the topography in this area was steeply sloping and there were almost no areas suitable for any historic or prehistoric occupation. The north half of the transects revealed extensive disturbance, including push piles, broadly altered topography, and small borrow pits.

At the western edge of the project boundary, adjacent to the Saluda River, we identified a levee about 8 feet higher than the surrounding floodplain. To the north of this levee, toward the termination of our north-south shovel tests, there was a large wetland which did contain wet soils at the time of the survey. A smaller wetland was found south of this levee and adjacent to the Saluda River. Two transects were established

running west to east on this levee, with shovel tests at 100 foot intervals. The soils here were typical of the Congaree Series and shovel testing penetrated the C horizon at about 2.0 feet (with the maximum test depths being about 2.2 feet). This levee, in spite of its height, is periodically flooded and the vegetation is generally open.

On the south side of the Saluda River a series of 28 transects were established running east-west from a bisecting powerline easement. The northern 15 of these transects were primarily on the east side of the transmission line since there was a large and steeply sloping draw (or hollow) to the west. The topography throughout was sloping with relatively few, small level areas. The soils were eroded, with red clay at or just under the surface, and the vegetation was generally thick. There was little indication that any forest management was taking place in this area.

The southern 13 transects were also excavated to the east and west and of the transmission line, although in this area the western terminus were disturbed areas currently being used for ash disposal or borrow pits. While the eastern transects all sloped steeply down to the spillway, those on the west evidenced extensive ground modifications which do not reveal themselves on the topographic maps. Some of these modifications were clearly related to the dam construction, including a road access to the spillway, as well as a very large borrow pit associated with the spillway.

Site locations were identified using a Global Positioning System for the recordation of the UTM's. The GPS positions were taken with a Garmin GPS 12XL rover and a Garmin GBR 21 Beacon Receiver. The Garmin 12XL tracks up to twelve satellites, each with a separate channel that is continuously being read. The benefit of parallel channel receivers is their improved sensitivity and ability to obtain and hold a satellite lock in difficult situations, such as in forests or urban environments where signal obstruction is a frequent problem. This was a vital consideration for the study area.

GPS accuracy is generally affected by a number of sources of potential error, including errors

with satellite clocks, multipathing, and selective availability. Satellite clock errors can occur when the satellite's clock is off by as little as a millisecond, or when a slightly-askew orbit results in a distance error. Multipathing occurs when the signal bounces off trees, chainlink fences, or bodies of water. Multipathing probably occurred occasionally during this survey, but we attempted to reduce the problem by taking readings in areas of minimal vegetation. The source of most extreme GPS errors is selective availability (SA), the deliberate mistiming of satellite signals by the Department of Defense. This degradation results in horizontal errors of up to 100 m 95% of the time, although the error may be as much as 300 m. However, SA had been turned off by the DOD and we discovered that 3D¹ and DGPS were identical.

Architectural Survey

As previously discussed, given the nature of this project, we elected to use a 1.0 mile area of potential effect (APE), which was calculated from the edge of the project tract. This APE encompasses approximately 5,500 acres.

The architectural survey recorded buildings, sites, structures, and objects which appeared to have been constructed before 1950. Typical of such projects, this survey recorded only those which "have kept their integrity" (Anonymous n.d.:4).

For each identified resource a Statewide Survey Site Form was completed and at least two representative photographs were taken. Permanent control numbers were assigned by the Survey Staff of the S.C. Department of Archives and History at the conclusion of the study. The Site Forms for the resources identified during this study have been submitted to the S.C. Department of Archives and History.

¹ A basic requirement for GPS position accuracy is having a lock on at least four satellites, which places the receiver in 3D mode. This is critical — as an example, positions calculated with less than four satellites can have horizontal errors in excess of a mile, or over 1,600 m.

The survey was conducted by driving the public roads (typically county or state secondary roads) in the APE. On the north side of the Saluda these roads include portions of Bush River Road (S-107), Cold Stream Road (S-271), SC 60, Kiawah Road, Wilton Hill Road (S-356), River Road (S-38), North Lake Road (SC 6), Shuler Road (S-867), Red Cliff Road (S-1527), Pres Linder Road (S-108), Collins Road (S-109), and Windward Point Road.

On the south side of the Saluda these roads include portions of S.C. 6, Corley Mill Road (S-68), Old Rapids Road, Bent Ridge Road, Hope Ferry Road, Kleckly Road, Meadowbrook Road, Brookdale Road, Andrew Corely Road (S-738), Oliver Meetz Road, Midway Road (S-28), and Dreher's Ferry Road.

The background research on individual properties was more limited than is the case on county-wide local history surveys. We collected all of the information readily available to us in the field. In other words, where we found residents willing to discuss their property, we took advantage of this to collect additional information. We did not, however, pursue individuals who were not at home, attempt to make contact with others in the area, or aggressively seek out property owners. We did not conduct deed research, nor did we search newspaper archives for property-specific citations.

Site Evaluation

Archaeological sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead federal agency, in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites,

buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

a. that are associated with events that have made a significant contribution to the broad patterns of our history; or

b. that are associated with the lives of persons significant in our past; or

c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;

- identification of the historic context applicable to the site, providing a framework for the evaluative process;

- identification of the important research questions the site might be

able to address, given the data sets and the context;

- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and
- identification of important research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered. As a result, some aspects of the evaluative process have been summarized, but we have tried to focus on each archaeological site's ability to address significant research topics within the context of its available data sets.

For architectural sites the evaluative process was somewhat different. Given the relatively limited architectural data available for most of the properties, we have focused on evaluating these sites using National Register Criterion C, focusing on the site's "distinctive characteristics." Key to this concept is the issue of integrity. This means that the property needs to have retained, essentially intact, its physical identity from the historic period.

Particular attention would be given to the integrity of design, workmanship, and materials. Design includes the organization of space, proportion, scale, technology, ornamentation, and materials. As *National Register Bulletin* 36 observes, "Recognizability of a property, or the ability of a property to convey its significance, depends largely upon the degree to which the design of the property is intact" (Townsend et al. 1993:18). Workmanship is evidence of the artisan's labor and skill and can apply to either the entire property or to specific features of the property. Finally, materials — the physical items used on and in the

property — are "of paramount importance under Criterion C" (Townsend et al. 1993:19). Integrity here is reflected by maintenance of the original material and avoidance of replacement materials.

A few resources have been recommended eligible under Criteria A or B. Criterion A is association with historic events or activities, while Criterion B is association with important persons.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories. These materials have been catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. The site forms for the identified archaeological sites have been filed with the South Carolina Institute of Archaeology and Anthropology. Field notes and photographic materials have been prepared for curation using archival standards and will be transferred to that agency as soon as the project is complete.

The primary raw material identified in the lithic collections was quartz, which was usually a translucent white, but occasionally yellowish-brown, or nearly clear (quartz crystal). This material is found throughout the Carolina Piedmont and might have been obtained from either veins or as cobbles in Piedmont river gravels.

Most of the remaining material may be classified as metavolcanic, meaning partially metamorphosed volcanic rocks. This might include flow banded rhyolite, porphyritic rhyolite, plain rhyolite, felsic tuff, welded vitric tuff or breccia tuff. These are, like the quartz, materials which are fairly common in the Piedmont and considered local.

Debitage categories might include primary (defined as flakes with 90% or more cortex), secondary (defined as having less than 90% cortex), or interior (defined as having no cortex). These categories, widely used, are briefly explained by Yohe (1996:54-56; for further information see Blanton et al. 1986 or Oliver et al. 1986).

Shatter is often called chunks by other researchers. Either term is typically applied to angular pieces of debitage of various sizes. They lack observable striking platforms, dorsal and ventral faces, or other characteristics of flakes. These items are often, although not always, blocky and angular. Shatter is thought to have been produced in greatest numbers in the very earliest stages of tool production. We had to be very conservative in our assessment of shatter on this project since we found many areas where heavy equipment had run over large blocks of quartz, producing modern "shatter."

Points, also called hafted bifaces by some, are symmetrical, pointed bifaces which are modified for hafting. The diagnostic lithic remains were compared to published typological descriptions for the various projectile points such as Coe (1952, 1964), Oliver (1981), and South (1959). Items which can not be securely identified because of damage or which lack the often definitive basal sections are classified simply as bifaces.

At this survey level tools are defined very simply, being placed in broad morphological categories. Our laboratory methods, for example, define a biface as an artifact with flakes removed on both sides (not distinguishing between preforms, early stage reductions, and so forth); a core is a piece of raw material from which flakes have been removed; an end scraper is a blade tool with at least one convex end which exhibits a steep angle; a used flake is a chip of stone that was used as a tool, exhibiting edge damage or wear; and a side scraper is a flake tool in which one of the long edges was retouched to serve as the scraping edge. These definitions generally follow those provided by Yohe (1996).

RESULTS OF SURVEY

Introduction

The cultural resources identified during the intensive survey of the 250 acre portion of the SCE&G tract include eight archaeological sites (38LX410, 38LX434-38LX440), as well as an isolated find (38LX00) (Figure 45).

All but one of these resources are recommended as ineligible for the National Register. In many cases the resources are heavily disturbed by logging with evidence of extensive erosion and loss of upper soil zones. Shovel testing revealed subsurface materials at only three of the sites and one of these represents a relatively late twentieth century trash dump which is probably not 50 years old. In general those sites recommended not eligible were judged to be far too disturbed to enable them to address significant research questions (Table 1).

recommended eligible under Criterion D, ability to yield important information.

Also identified are 41 historic resources, including 11 (2430126.0-.07, 2430128, 2430303, and 2430304) located on the survey tract (Table 2). We recommend 24 of these resources not eligible, two potentially eligible (and requiring additional research beyond the scope of this study), and 12 eligible for inclusion on the National Register. Three sites were found to be less than 50 years in age, but are likely to be eligible when they are old enough.

Of the 11 resources on the survey tract, five are recommended eligible (2430127.0, 2430127.02-.04, 2350304), three are recommended not eligible (2430127.01, 2430128, and 2430303), and three are less than 50 years old, but are likely to be eligible when they are old enough (2430127.05-.07).

Archaeological Sites

Table 1.
Archaeological Sites Identified in the Survey Tract

Site	Component	Size	Artifact #	Eligibility
38LX00	isolated historic find	625 ft ²	1	NE
38LX410	historic cemetery	2,500 ft ²	-	E
38LX434	historic refuse deposit	8,400 ft ²	19	NE
38LX435	prehistoric lithic scatter	21,450 ft ²	7	NE
38LX436	prehistoric/historic	5,600 ft ²	11	NE
38LX437	prehistoric lithic scatter	4,800 ft ²	11	NE
38LX438	prehistoric lithic scatter	5,200 ft ²	10	NE
38LX439	prehistoric/historic	1,200 ft ²	8	NE
38LX440	historic trash dump	16,800 ft ²	n/a	NE

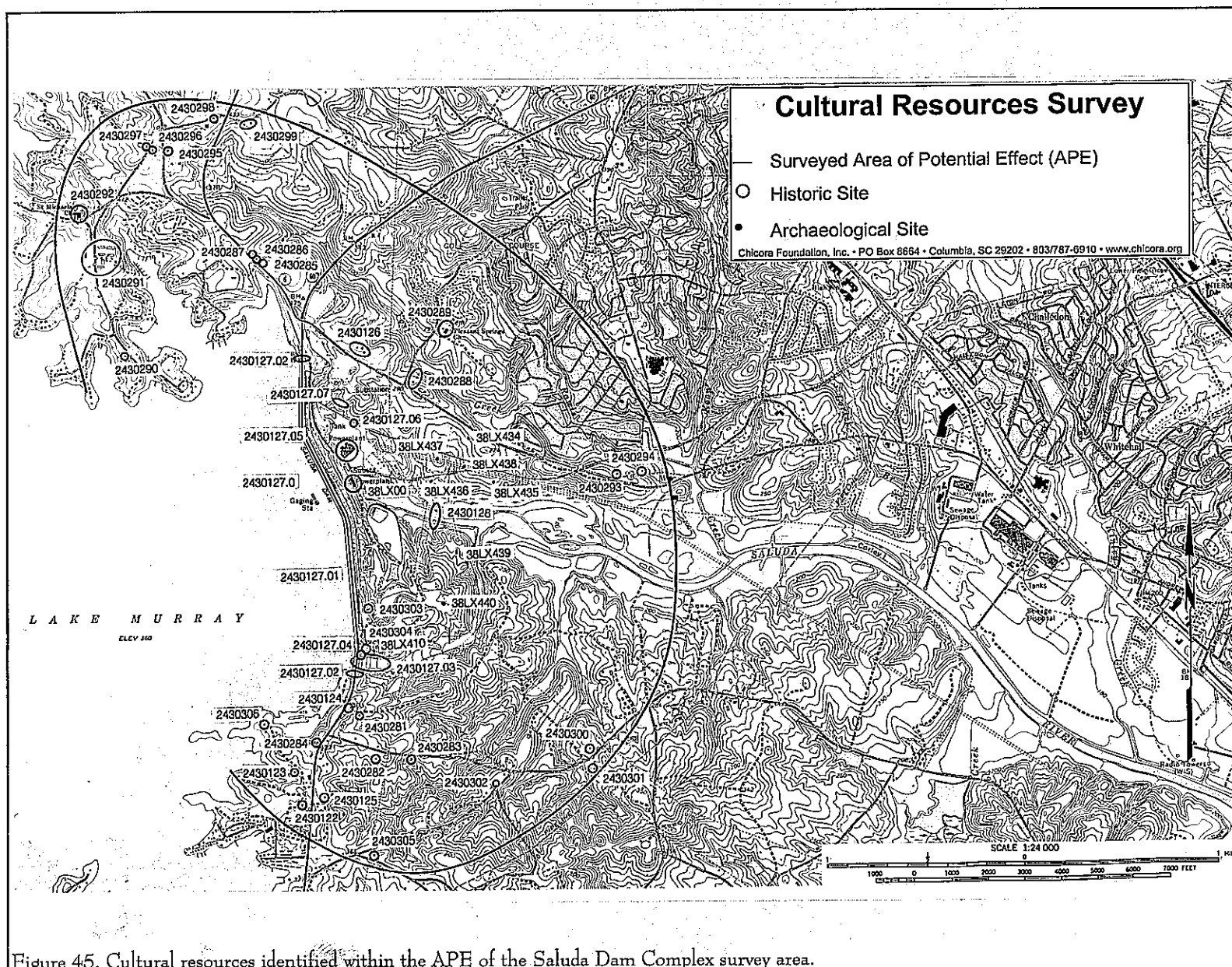
NE=not eligible; E = eligible

Site 38LX00

Strictly speaking, this is an isolated find, since the collection consists of a single item — a fragment of "black" bottle glass. This specimen, consisting of a fragmentary lip and neck, is consistent with mid to late eighteenth century wine and ale bottles and it represents the oldest historic item recovered from the survey tract.

The one site recommended eligible is a nineteenth and early twentieth century cemetery (38LX410). We have both photographic and documentary material associated with the site and it is

The item was recovered from the surface during the excavation of shovel tests on Transect 67 on the north side of the Saluda River. The item was recovered from within a borrow pit with near 100% surface visibility and no



RESULTS OF SURVEY

Table 2.
Historic Resources Identified in the Survey Tract

Site #/Name	Site Type	Eligibility (and Criterion)
2430127.0, Saluda Dam and Powerhouse	1930 dam & hydroelectric plant	Eligible (A/B/C)
2430127.01, Saluda Dam weirs	1979 dam component	Not Eligible
2430127.02, Saluda Dam entrance	ca. 1930 rock entrance (N&S)	Eligible (A/B/C)
2430127.03, Saluda Dam spillway	1930 spillway and gates	Eligible (A/B/C)
2430127.04, Switching Building	1930 switching building	Eligible (C)
2430127.05, McMeekin Station	1958 fossil fuel plant	Less than 50 yrs. old, but likely eligible when old enough (C)
2430127.06, McMeekin Track Hopper House	1958 coal unloading building	Less than 50 yrs. old, but likely eligible when old enough (C)
2430127.07, "Power for Progress" Sign	ca. 1958 boosterism sign	Less than 50 yrs. old, but likely eligible when old enough (C)
2430128, Temporary Saluda Bridge and road	1927 dam construction bridge	Not Eligible
2430303, Harmon Spring	natural spring on Harmon tract	Not Eligible
2430304, Yninger Cemetery	19th-20th century cemetery	Eligible (C/D)

other artifacts were identified in association. The central UTM coordinates are E480371 N3767941 (NAD 27 datum) and the item was found about 900 feet east of the substation and 600 feet north of the Saluda River. The soils in the area were originally Cecil fine sandy loams, although at the time of the survey this area consisted only of exposed red clay. To the south there is a second growth forest of pine and mixed hardwoods, although this area was heavily impacted by the original dam construction.

Shovel Test 9 was situated about 25 feet south of the find and a series of shovel tests were run in cardinal directions off this test. The additional eight tests found no evidence of other historic remains. Even outside the borrow pit the shovel tests revealed no remnant soil, with about 0.2 foot of yellowish-brown (10YR5/4) sandy clay overlying red (2.5YR4/8) clay.

Reference to Figure 38 reveals that this area had been cleared by dam construction. Given the amount of soil movement, even prior to the current borrow activities, it is likely that any archaeological deposits in this area were entirely mixed or destroyed.

This isolated find is recommended not eligible for inclusion on the National Register and no additional management activities are recommended, pending review and concurrence by the lead federal agency in consultation with the State Historic Preservation Office.

38LX410, Yninger Cemetery

Although the location of this cemetery has been generally known, it wasn't recorded as an archaeological site until the 1997 reconnaissance for the SC 6 highway widening, when it was given the site number 38LX410 (Jordan and Butler 1997). The site is located on a ridge overlooking the spillway, about 250 feet to the south. The central UTM coordinates are E480072 N3766513 (NAD 27) and the site is at an elevation of about 388 feet AMSL. The soils in this area are identified as Cecil fine sandy loams and the vegetation consists of primarily hardwoods with some pine.

The site consists of a sunken area (probably indicating a fence of some sort) about 50 feet square.

CULTURAL RESOURCES SURVEY OF THE SALUDA DAM COMPLEX

Table 3.
Historic Resources Identified Outside the Survey Tract, But Within the APE

Site #/Name	Site Type	Eligibility (and Criterion)
2430122	ca. 1900 structure	Not Eligible
2430123	ca. 1925 structure	Not Eligible
2430124, Corley House	ca. 1925 structure	Potentially Eligible (C)
2430125	ca. 1900 structure	Not Eligible
2430126, Selwood	ca. 1840 I-House	Eligible (C)
2430281	ca. 1950 structure	Not Eligible
2430282	ca. 1925 structure	Not Eligible
2430283	ca. 1950 structure	Not Eligible
2430284	1950 structure	Not Eligible
2430285, Lorick Plantation House	1840 I-House	Not Eligible
2430286, Jasmine House	ca. 1920 structure	Not Eligible
2430287, River Road House	ca. 1925 structure	Not Eligible
2430288	ca. 1930 structure	Not Eligible
2430289, Pleasant Springs AME Church Cemetery	ca. 1888 African American Cemetery	Eligible (C/D)
2430290, Shealy House	ca. 1920 structure	Not Eligible
2430291, J.W. Dreher House/Glencove Farms	ca. 1840 I-House and farm	Eligible (C)
2430290.0, St. Michael's Lutheran Church	1921 church	Eligible (A/C)
2430290.01, St. Michael's Lutheran Church Cemetery	ca. 1813 church cemetery	Eligible (A/C/D)
2430293	ca. 1945 structure	Not Eligible
2430294	ca. 1950 structure	Not Eligible
2430295	ca. 1935 structure	Not Eligible
2430296, Wyse House	ca. 1930 structure	Not Eligible
2430297, E.S. Dreher House	1918 structure	Eligible (B/C)
2430298, Youngier-Bickley House	ca. 1870 structure	Not Eligible
2430299	ca. 1905 structure	Not Eligible
2430300	ca. 1925 structure	Not Eligible
2430301, Wade Monts House	1870 structure	Not Eligible
2430302, Corley Family Cemetery	ca. 1886 family cemetery	Eligible (C/D)
2430305, Wingard House	ca. 1930 structure	Not Eligible
2430306, Slick Farm	ca. 1840 I-House	Potentially Eligible (C)

Present are two granite chunks with polished faces, three field stones, three marble die on base markers, one marble tablet stone, and one broken marble tablet stone (with the top fragment not found).

Figure 20 shows the location of the cemetery before construction removed much of the ridge to the southeast and Figure 33 shows the cemetery in the midst of the spillway expansion in the early 1940s.

Given this level of construction it is somewhat amazing that the cemetery has survived so well preserved.

Records at SCE&G transcribed by the Columbia Chapter of the S.C. Genealogical Society (1981:23) reveal that the cemetery was variously identified as being on the property of N.K. (or N.C.) Gable and was given the Option Numbers 172 or 173B. Based on our research, it was likely on the

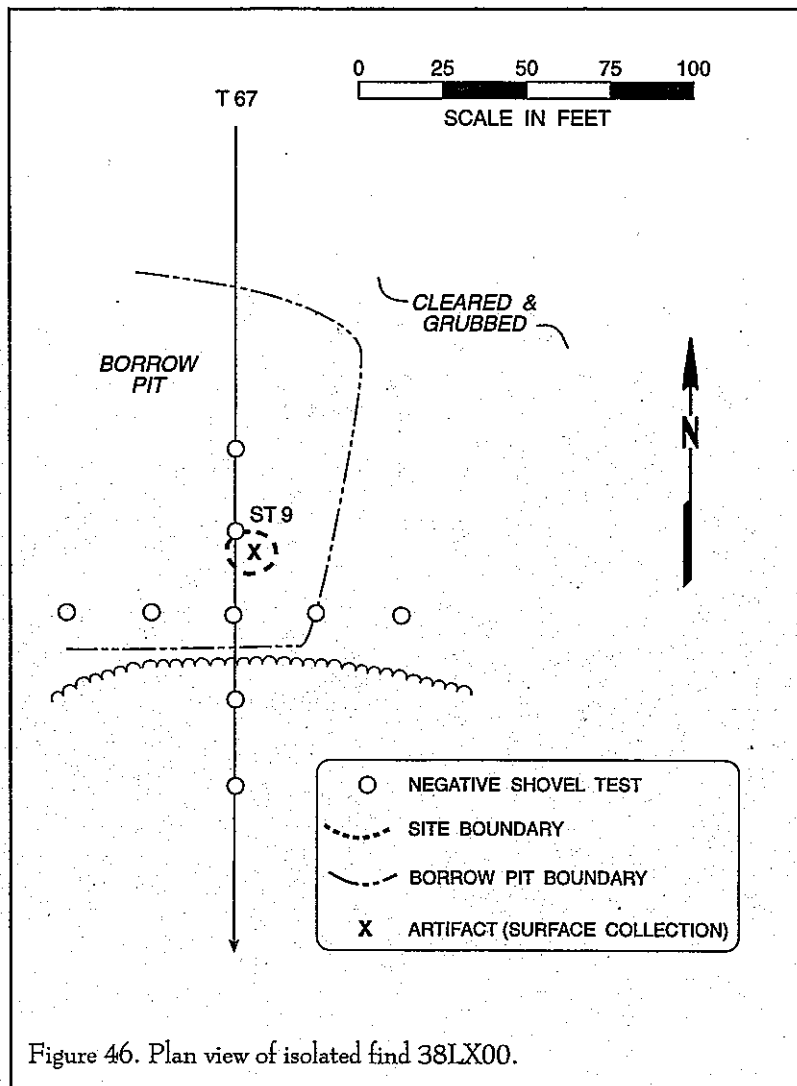


Figure 46. Plan view of isolated find 38LX00.

property of G. Maxie Gable, Option 173. Regardless, throughout the Lexington Water Power Company correspondence it was called the Gable Graveyard and was described as, "plot 40 x 40' . . . clean, cleared, and well kept and is near the southern end of the dam and spillway about 390 contour" (Columbia Chapter of the S.C. Genealogical Society 1981:23). The files revealed that at that time there were eight graves with inscriptions and six unmarked graves.

The graves present in 1927 and still found today include those of Frances Gable (1835-1924), John Yninger (1814-1877), Julia Ann Corley (1823-

1917), and Rebecca Monts (1833-1911). Present in 1927, but today missing, were stones for Ann Rose Yninger (1873-1875), Michael Gable (1841-1915), Fannie F. Gable (1880-1881), and Catherine Gable (1830-1900). We suspect that the broken stone is that of Ann Rose Yninger. The remaining stones might be found with probing. The unmarked graves likely include those with only fieldstones. The original notes distinguish between those with inscriptions — not simply marked — and those which are unmarked, leading us to believe that the important distinction to the surveyors was their ability to identify the name of the individual.

This cemetery is recommended eligible under Criterion D. Under this criterion, integrity of location, design, materials, and association are essential, with integrity of setting often assisting in the evaluative process. Location refers to the actual physical place — and clearly this cemetery possesses integrity of location since it has not been moved. This is of special importance in the region, with so many small family cemeteries being displaced by the construction, few examples of this type survive. Design, in reference to archaeological sites, mean the

patterning of features and areas. While this cemetery may have lost several stones (or they may simply be buried), not only do most remain, but even the outline of the cemetery is still clearly present on the landscape. Integrity of materials generally refers to the completeness and preservation of the assemblage. Again, in spite of considerable construction in the immediate area, this cemetery reflects excellent integrity of materials. The bulk of the original stones are still present, as are even the fieldstones and small pieces of polished granite used to mark graves. Integrity of association under Criterion D means only that there is a clear connection between the research questions and the data sets. At this site the research questions might

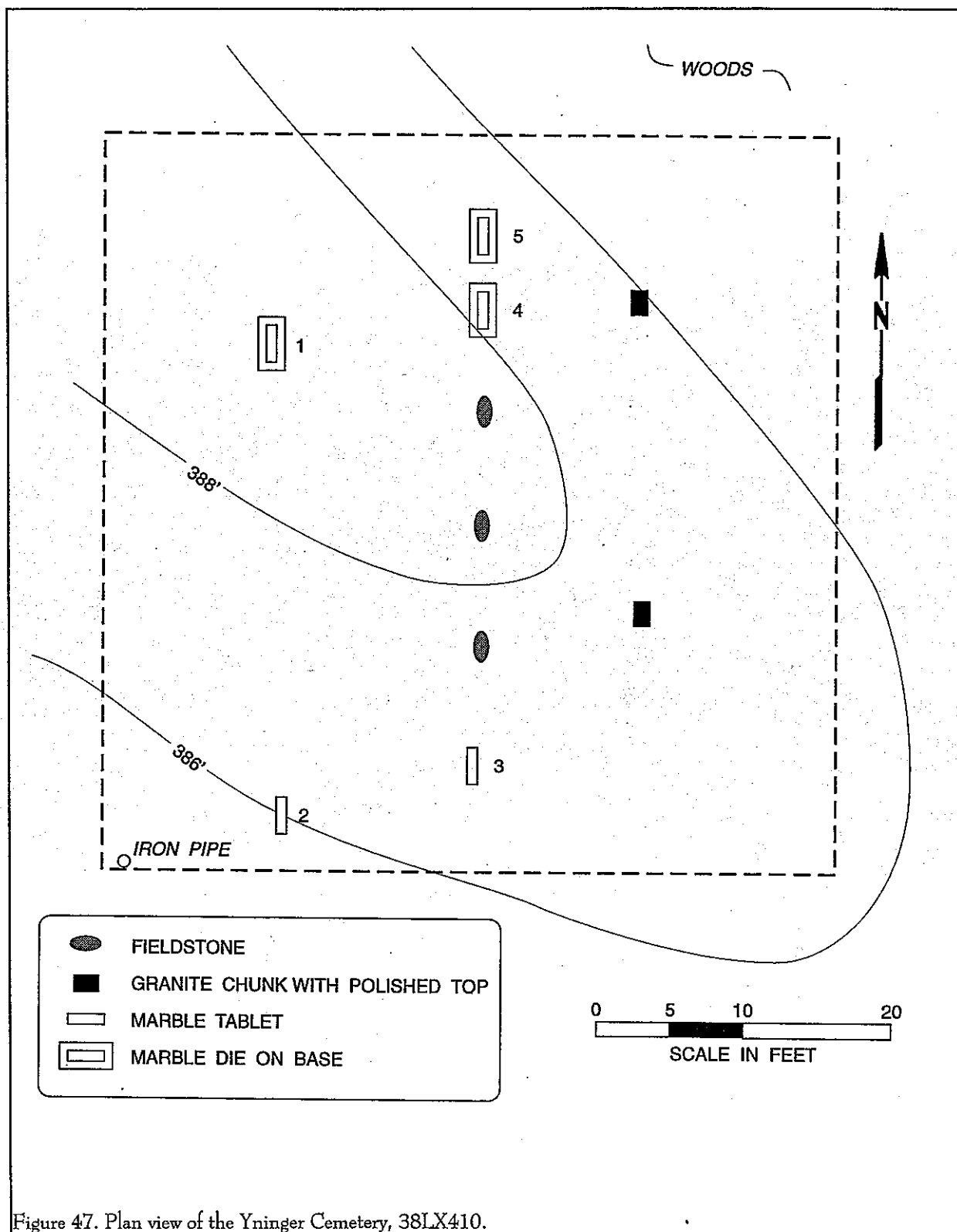


Figure 47. Plan view of the Yninger Cemetery, 38LX410.



Figure 48. View of the Yninger Cemetery (38LX410) looking southeast.

appropriately involve the socioeconomic status and ethnicity of early German settlers in the Dutch Fork area through the study of both coffin hardware, grave patterns, and biocultural study of disease, health, and nutrition. Again, many of these questions can be addressed through only a small handful of graveyards since so many have been "moved" for the dam construction and this movement likely destroyed many of the critical data sets.

Of course, graveyards are also protected by South Carolina law (e.g. SC Code 16-17-590 et seq.). Nevertheless, we recommend that SCE&G do more than simply follow the letter of the law.

Given the proximity of construction to this cemetery, special steps need to be taken to ensure its preservation. This will entail clearly marking the cemetery on all construction documents with a clear note on the drawings and plans (not simply in the special conditions) that the area is off limits to all

construction activity, including but not limited to staging, parking, turn arounds, and storage of materials. Furthermore, the area should be made off-limits to all contractor personnel. SCE&G should also fence this area, using minimally a 20-foot buffer (or a size of 70 by 70 feet) using high visibility barrier fencing. At the conclusion of the construction, this area should have all vegetation removed and a chain link fence erected to mark its location. Signage should detail appropriate regulations, such as the cemetery being closed after dark and that vandalism and theft are felonies under South Carolina law.

This site is also recorded as 2430304 (see the discussion of historic sites below).

Site 38LX434

Site 38LX434 is a historic refuse scatter measuring 140 feet north-south by 60 feet east-west, yielding an scatter of about 8,400 feet² (Figure 49).

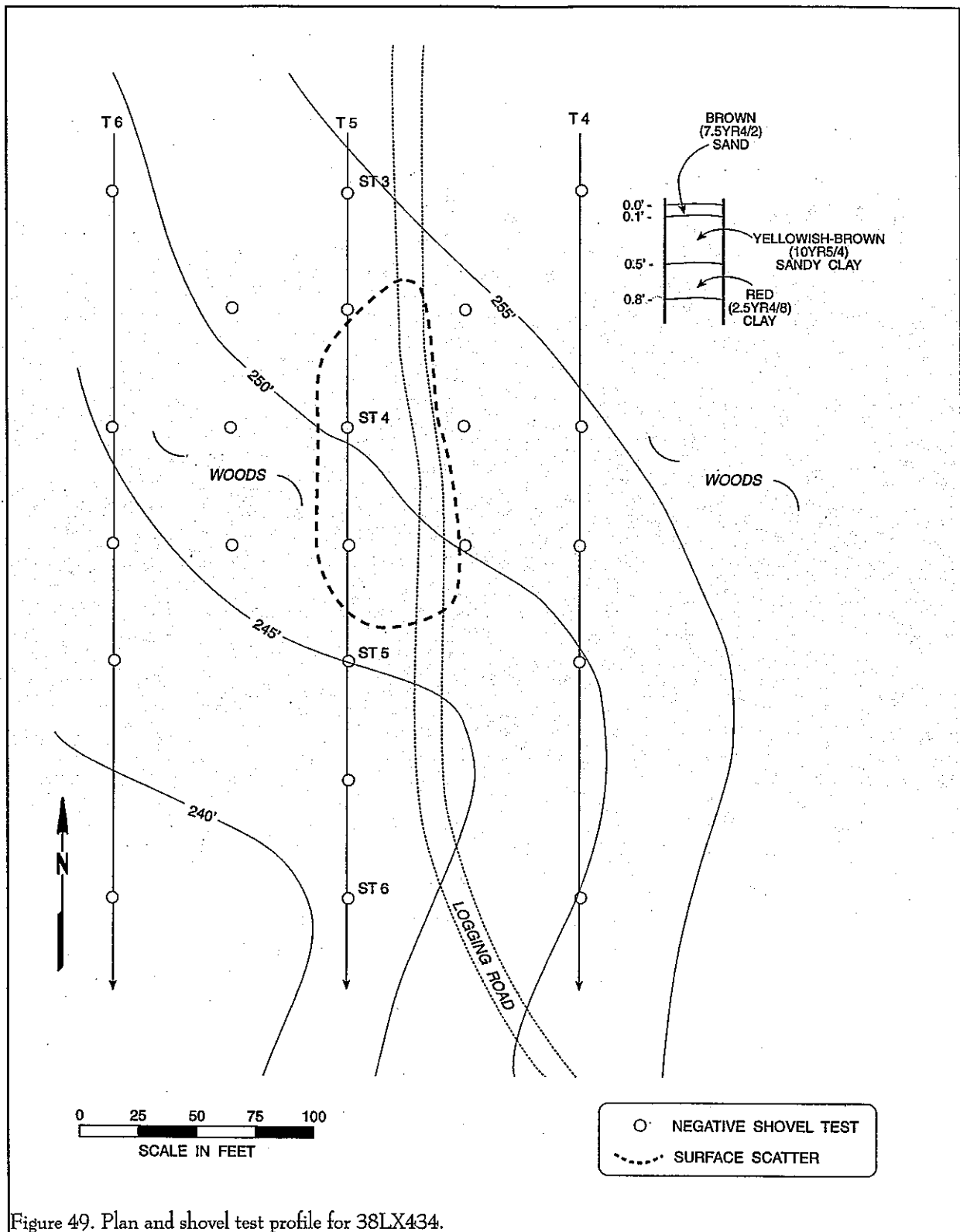


Figure 49. Plan and shovel test profile for 38LX434.



Figure 50. View of 38LX434, looking south.

The site is located around and west of a north-south logging road about 300 feet south of Bush River Road on the north side of the Saluda River. The central UTM coordinates are E480930 N3768214 (NAD27 datum) and the elevation is about 250 feet AMSL on a southwest facing ridge nose or side slope. This area was in relatively dense forest at the time of the survey, with an overstory of pine and an understory of scrub hardwoods (typical of areas without controlled burns). The pines were about 30 years old and represent self-seeded trees which had re-established after the last logging episode. Originally this area seems to have been at the edge of cultivated fields. There is no indication of any nearby structures on the tract, although there is a structure on the north side of the highway.

The site was initially identified by surface finds while walking shovel tests on Transect 5. Surface materials on the adjacent logging road were heavily fragmented and only visible with very careful scrutiny.

No materials were found in the initial shovel tests and a series of 12 additional shovel tests were excavated in a cruciform pattern at 50-foot intervals across the site in an effort to recover artifacts from intact site areas. No artifacts were encountered in any of the tests and the typical profile revealed about 0.1 foot of recently developed or deposited A horizon soil overlying a yellowish-brown(10YR5/4) sandy clay about 0.4 foot in depth. This was found over a firm red (2.5YR4/6) clay. It appears that in this area up to 0.7 foot of soil has been lost.

Materials recovered from the surface in this area include 15 fragments of whiteware, one fragment of white porcelain, one fragment of milk glass, one blue glass fragment, and one medicine bottle with a screw top. These materials are not particularly time sensitive, although they likely post-date 1930. Since there is no structure clearly associated, these remains may represent trash deposited after the completion of the dam construction, perhaps by neighbors who found the

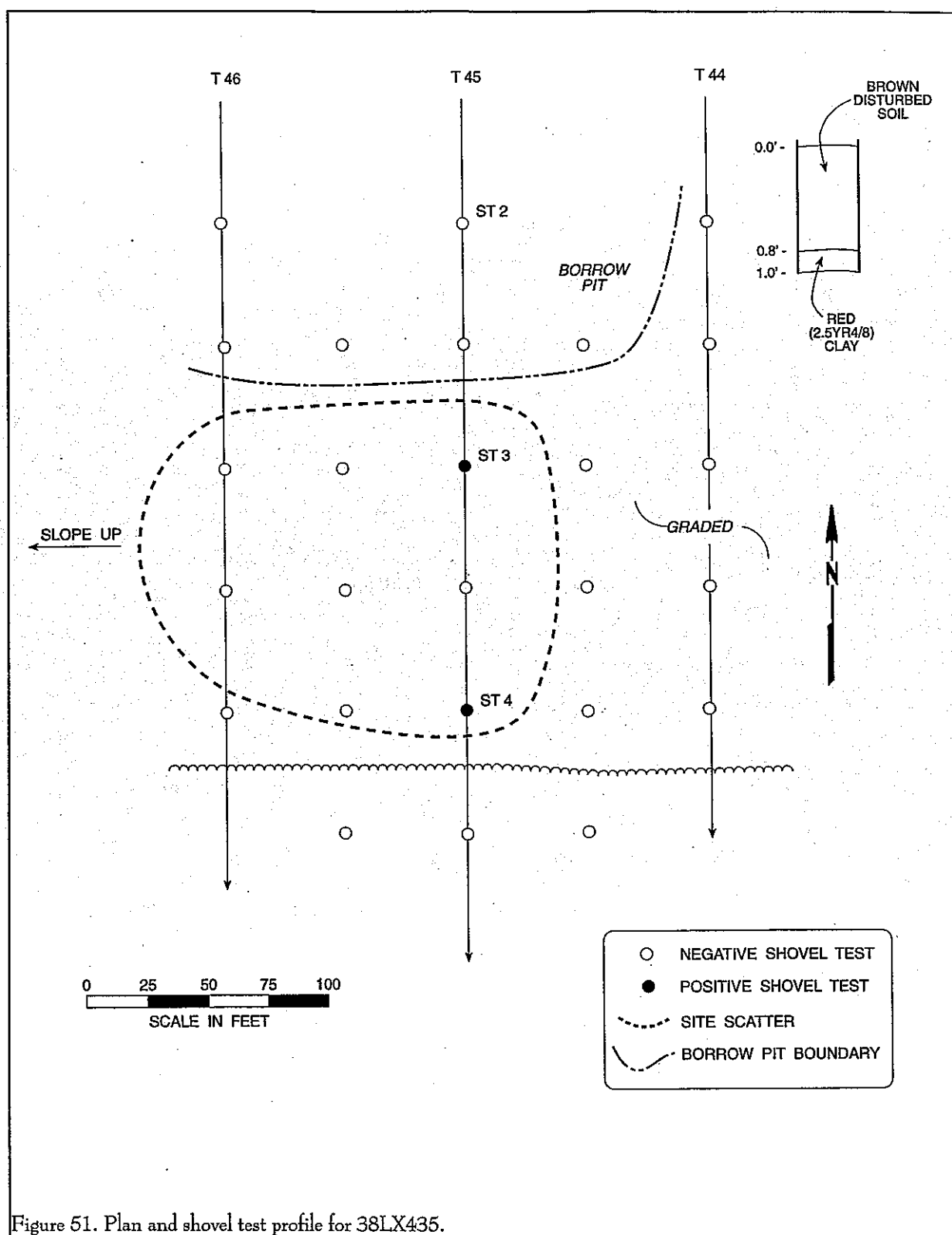


Figure 51. Plan and shovel test profile for 38LX435.

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property a convenient dumping location.

The remains represent a narrow range of artifact data sets — primarily ceramic and glass container fragments. The integrity of the remains appears compromised by years of erosion and logging, although the real concern is the association of the remains. There is no way to tie these materials to any particular family or even group of families. We do not believe that the remains offer the potential to address significant research questions appropriate to the first half of the twentieth century. Consequently, we recommend the site as not eligible. No additional management activities are recommended pending the review and concurrence of the State Historic Preservation Office.

38LX435

This site was encountered in two consecutive shovel tests on Transect 45. The site is situated at the edge of current construction activity about 1,000 feet north of the Saluda River on a southeast facing side slope at an elevation of about 230 feet AMSL. The central UTM coordinates are E481163 N3767881 (NAD27 datum) and the site is found in an area of extensive grading, just south of a borrow pit. Materials were identified over an area measuring about 130 feet north-south by 165 feet east-west or about 21,450 feet².

Shovel Test 3 produced a quartz interior flake and a fragmentary quartz biface. Shovel Test 4, 100 feet to the south, yielded a single quartz interior flake. A series of 16 additional shovel tests were excavated around the site area at 50 foot intervals. None of these additional shovel tests produced any materials.

Construction activities in the site area include a borrow pit to the south and extensive grading in the vicinity of the scatter. Some of the stripped soil is stockpiled off to one side, although the shovel tests revealed that a significant portion of the soil has simply been redistributed — apparently being pushed off the ridge into the lower elevations. Shovel tests in the site area reveal about 0.8 foot of disturbed brown soil with frequent clay inclusions overlying a firm red (2.5YR4/8) clay subsoil. We believe that the site likely originated

further to the west, on the ridge top, and has been pushed to the east (the "location" of this site). The ridge top to the west, however, is completely cut down to red clay and there was no evidence of any archaeological materials in that area. Moreover, the site has yielded no diagnostic material that might allow us to better understand when the materials were deposited.

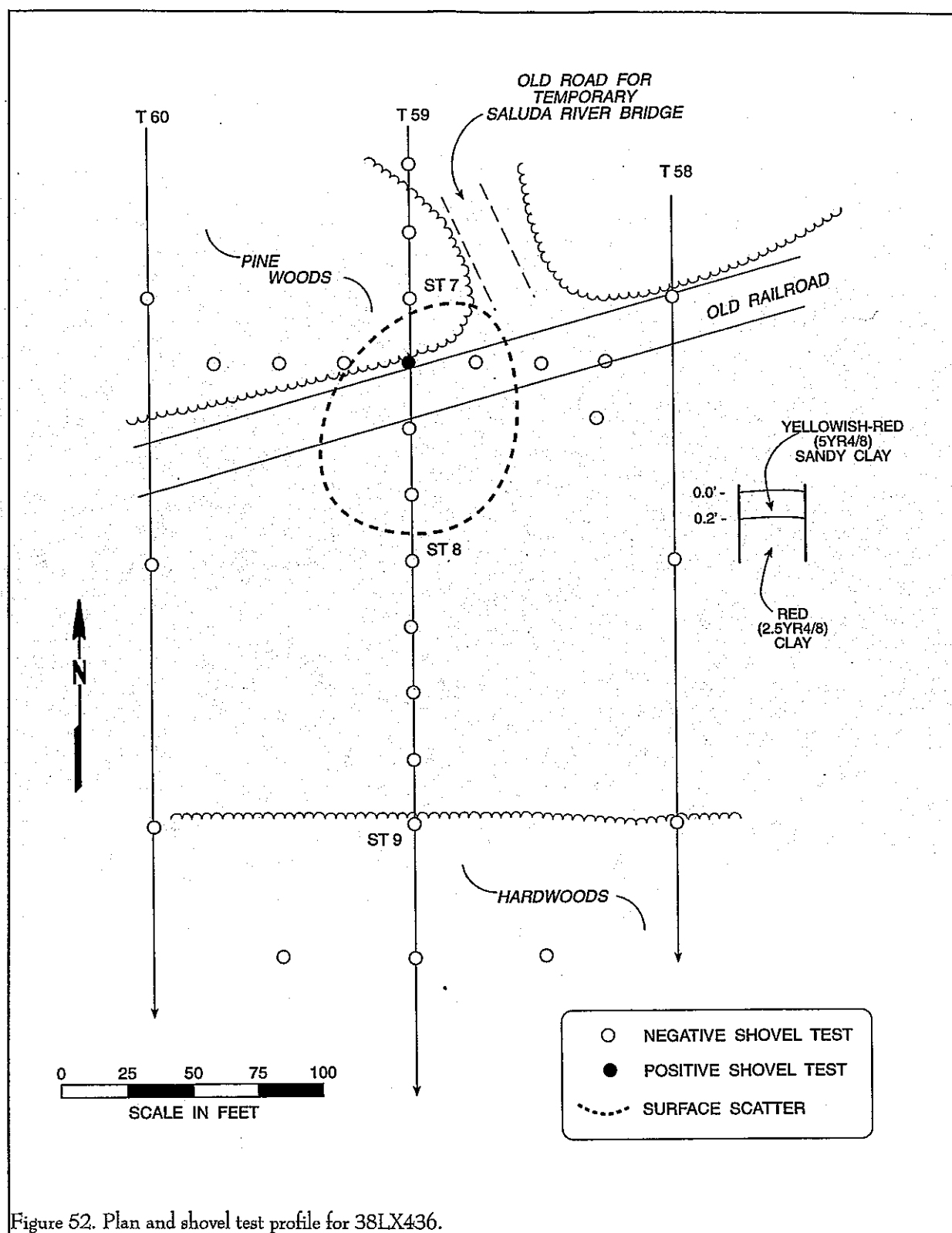
This site exhibits no integrity and the recovered materials are likely displaced from elsewhere. As a result, it cannot address significant research questions. Even if temporally sensitive materials were present, the lack of site integrity is so significant that we can envision no appropriate research questions. Consequently, the site is recommended not eligible for inclusion on the National Register and no additional management activities are recommended, pending the review and concurrence of the State Historic Preservation Office and the lead federal agency.

38LX436

This site is situated just southwest of the intersection of a railroad spur (just recently removed) and the temporary Saluda Bridge Road about 1,000 feet north of the river. The site is found on a south facing side slope at an elevation of 205 feet AMSL. The central UTM coordinates are E480637 N3767888 (NAD27 datum). The site was first encountered as surface material on Transect 59 with remains scattered over an area measuring about 80 feet north-south by 70 feet east-west or about 5,600 feet².

From the demolished railroad easement south for about 175 feet the area had been cleared and grubbed in preparation of putting in new dam access. To the north there are planted pine woods, while to the south of this area are hardwoods associated with the lower slopes.

Materials found on the surface of the site included two whiteware ceramics, one fragment of modern window glass, one insulator with a date of 1931, and five quartz interior flakes. Although neither Shovel Tests 7 or 8, on either side of the site, yielded any materials, we chose to place an additional 16 shovel tests across the site area at 25 foot intervals (Figure 52). Of these, the shovel test 25 feet south of Shovel



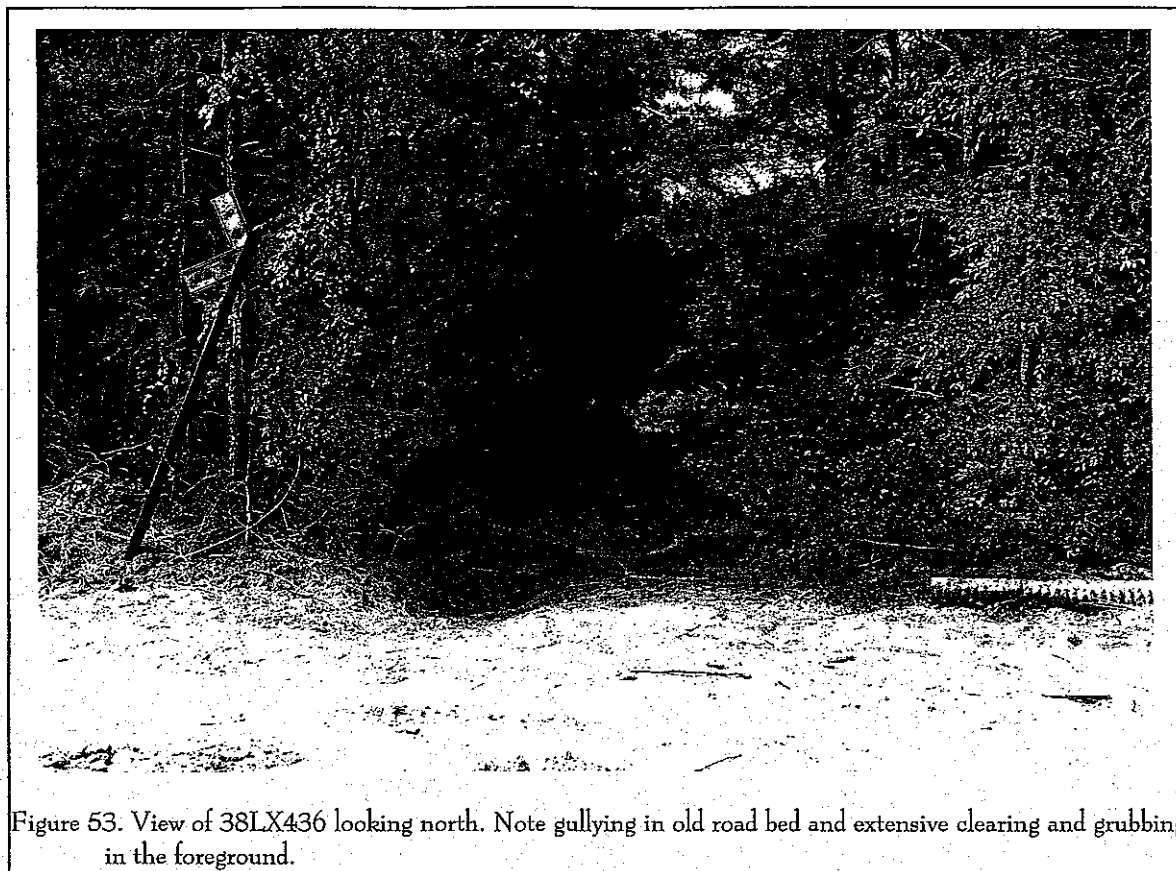


Figure 53. View of 38LX436 looking north. Note gullying in old road bed and extensive clearing and grubbing in the foreground.

Test 7 produced one fragment of brown glass (modern beer bottle) and one fragment of iron strap. The remaining 15 shovel tests were all negative.

The shovel tests documented that this area has seen extensive damage. The soil profiles revealed about 0.2 foot of yellowish-red (5YR4/8) sandy clay over a firm red (2.5YR4/8) clay subsoil. This profile represents the base of Cecil soils. The Ap or A horizon has been completely removed with the loss of about 0.5 foot of soil. The B1 and B21t horizons are consistent with the Cecil fine sandy loams of the area.

This area was historically in the immediate area of not only the road and railroad, but also large stockpiles of construction materials (see Figure 22). The identified materials may represent scatter from a construction zone, supplemented by modern debris (the window glass and beer bottle) and transmission line maintenance (the 1931 insulator). In other words, this

scatter of materials may not actually represent any one activity, but rather a range of activities taking place at a "cross-roads" locale in a construction area. The sparseness of subsurface materials is likely the result of the area being partially graded.

We do not believe that the site possesses the data sets or integrity to address significant questions concerning the lifeways of construction crews building the dam or period-specific disposal practices. As a result the site is recommended not eligible for inclusion on the National Register and no additional management activities are recommended, pending the review and concurrence of the State Historic Preservation Office and the lead federal agency.

38LX437

Site 38LX437 is situated under a major powerline easement about 1,400 feet north of the

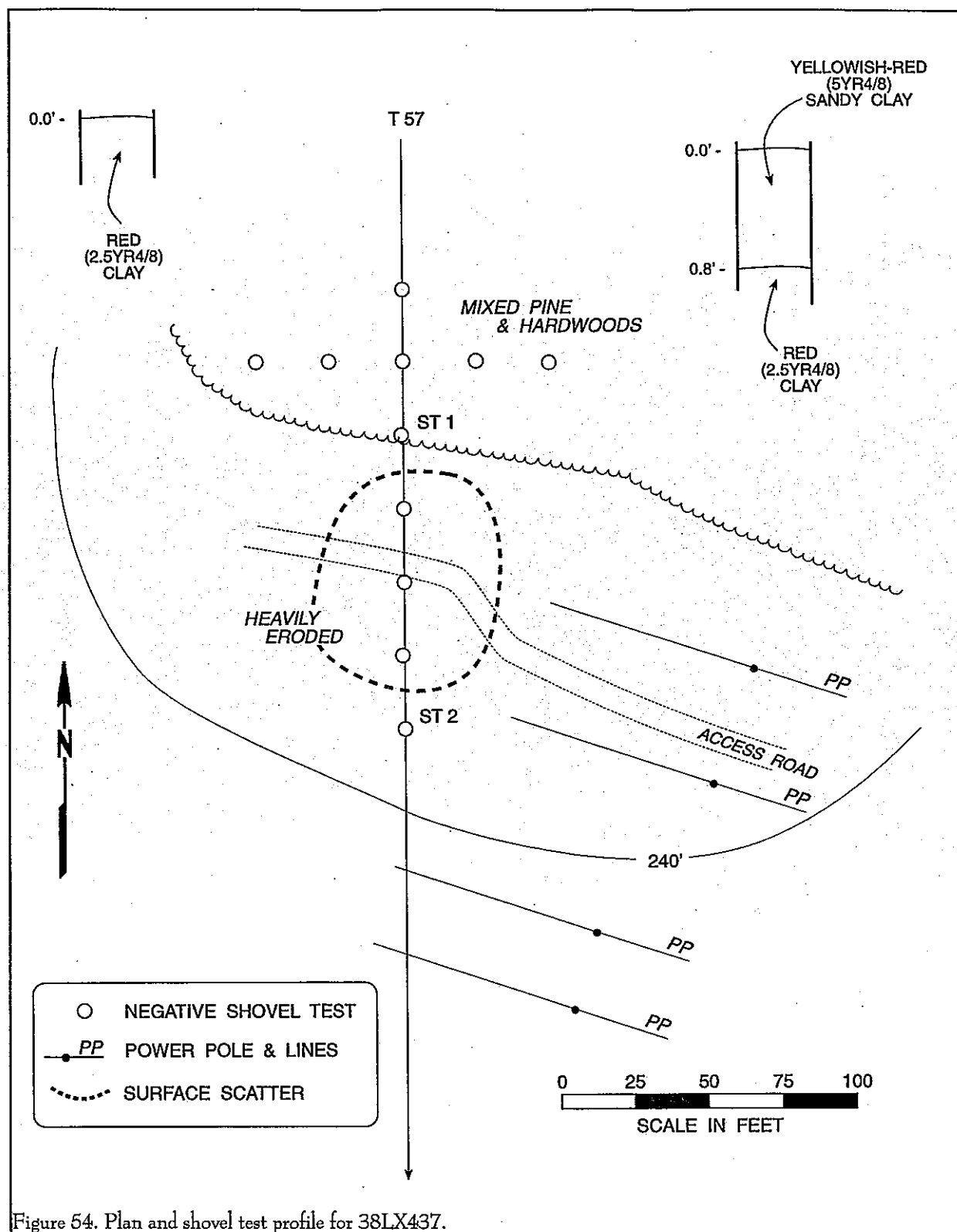


Figure 54. Plan and shovel test profile for 38LX437.

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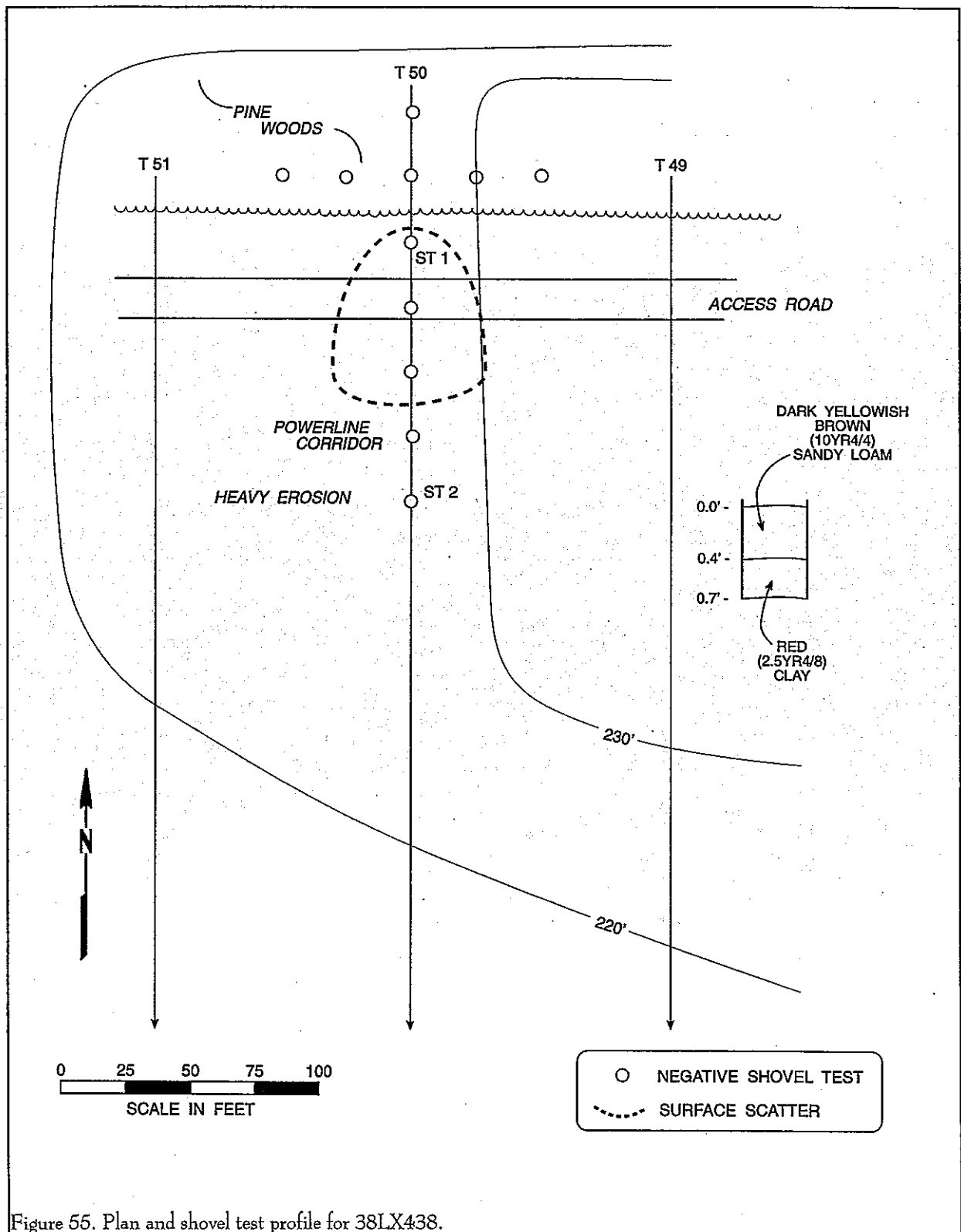


Figure 55. Plan and shovel test profile for 38LX438.

Saluda River and about 2,100 feet east of the McMeekin plant. A small intermittent tributary of the Saluda (dry at the time of this survey) is situated about 400 feet to the east of the site. The site is found on a ridge top or crest at an elevation of about 240 feet AMSL. The central UTM coordinates are E480678 N3768066 (NAD27 datum).

The site was initially encountered walking between shovel tests on Transect 57. The powerline easement, at the time of this study, was grown up, although there were numerous bald spots and the access road exhibited extensive erosion. As a result surface visibility was about 75%. To the north was a narrow remnant ridge with mixed pine and hardwoods, while to the south the area was largely in scrub and grass (a number of powerlines cross this particular area).

The surface scatter of material included one rhyolite interior flake, one chert used flake, one quartz biface fragment, and eight quartz interior flakes over an area about 80 feet north-south by 60 feet east-west. In order to further examine the area a series of nine additional shovel tests were excavated in the general site area. Since the transmission line was found to be eroded through both the A and B horizons to the red clay subsoil, our shovel tests focused on the area just to the north of the site. We hoped that there might be some remnant of the site preserved in the wooded area where erosion was less severe. The shovel tests in that area revealed about 0.8 foot of yellowish-red (5YR4/8) sandy clay overlying the red clay subsoil. There was not, however, any evidence of an A horizon. None of the shovel tests yielded any additional remains.

It appears that this site has completely eroded out of its soil matrix and today consists entirely of surface materials. Although several tools were identified, with one of the specimens representing an extralocal material, the complete lack of site integrity precludes the site from addressing significant research questions. As a result, we recommend the site not eligible for inclusion on the National Register of Historic Places. No additional management activities are recommended at this site, pending the review and concurrence of the State Historic Preservation Office and the lead federal agency for this project.

38LX438

This site is also situated under transmission lines on a heavily eroded easement about 700 feet east-southeast of 38LX437 and separated from it by a dry gully or intermittent drainage. The central UTM coordinates are E480897 N3768012 (NAD27 datum). Site 38LX438, at an elevation of about 230 feet AMSL, is situated on the west slope of a ridge overlooking the drainage. To the north is planted pine and a railroad spur cut which has removed the central portion of the ridge.

The site was first encountered in the immediate vicinity of Shovel Test 1, although no materials were found in the shovel test. Surface remains included nine quartz interior flakes and one chert interior flake recovered from an area measuring about 80 feet north-south by 65 feet east-west.

A series of three shovel tests at 25 foot intervals were excavated on Transect 50, but all revealed that the transmission easement was heavily eroded. In each case we found red clay subsoil at the surface, without even any recently developed A horizon soil. Consequently, we shifted our attention to the north, where we hoped that the pine woods might have preserved some portion of the site. A series of five shovel tests in that area revealed that the soil profile was better preserved in this area, with 0.4 foot of dark yellowish-brown (10YR4/4) sandy loam overlying a red clay subsoil. This sand loam represents the basal portion of the B horizon Cecil soils, indicating that even in this area upwards of 0.5 foot of soil has been lost.

This, like site 38LX437, is situated in an area of the complex that did not receive a great deal of disturbance from the dam construction, but was cultivated. This likely produced extensive erosion, which was certainly increased with the construction of the transmission lines. The railroad spur to the north was constructed with the McMeekin Plant in 1956 and this may have caused additional damage to the general area.

Regardless, today there are not the data sets present at this site, nor the integrity, to allow it address significant research questions. As a result, the site is recommended not eligible. No additional management

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activities are required, pending the concurrence of the State Historic Preservation Office and the lead federal agency.

38LX439

This site represents a very thin scatter of prehistoric lithic materials and two historic remains found on an access road on the south side of the Saluda. The site is situated on a north facing ridge slope at an elevation of 238 feet AMSL. The central UTM coordinates are E480838 N3767307 (NAD27 datum) and the site overlooks a drainage which flowed north into the Saluda before it was converted to the spillway. The area is dominated by planted pines, with evidence of both old logging (stumps and rutting) as well as old gullies. Aerial photographs suggest that much of this area was logged at the time of the dam construction and allowed to grow back in second growth. Consequently there have been multiple periods of logging using a variety of forestry approaches. Today the area has a dense understory characterized by a forest without any prescribed burns.



Figure 56. View of site 38LX439 and the access road, looking north.

During the survey we noted flakes in an access road just north of Transect 95, although shovel tests had failed to produce any materials. Recovered was one rhyolite interior flake, five quartz interior flakes, and two whiteware ceramics.

Erosion was sufficiently severe in this area for us to only bisect the site area with an additional nine shovel tests (Figure 57). Those tests which fell in the road revealed red clay on the surface. In the wooded areas the profiles revealed about 0.3 foot of dark grayish brown (2.5YR4/2) sand overlying about 0.2 foot of light yellowish brown (10YR6/4) sandy clay. Below this we found a red (2.5YR4/6) clay subsoil. This profile is consistent with Cecil soils, although it appears that about 0.2 foot has been lost to erosion. It seems that in this particular area the erosion was not as significant as elsewhere in the immediate area. Nevertheless, none of the shovel tests yielded any archaeological remains.

The low density of remains and very limited data sets present, coupled with the absence of materials found below the surface, suggest that the site cannot address significant research questions. Consequently, the site is recommended not eligible for inclusion on the National Register. No additional management activities are recommended, pending the review and concurrence of the State Historic Preservation Office and the lead federal agency.

38LX440

This site was also identified on the south side of the Saluda River, about 1,000 feet north of the spillway and immediately adjacent and to the west of a powerline easement. The central UTM coordinates for the site

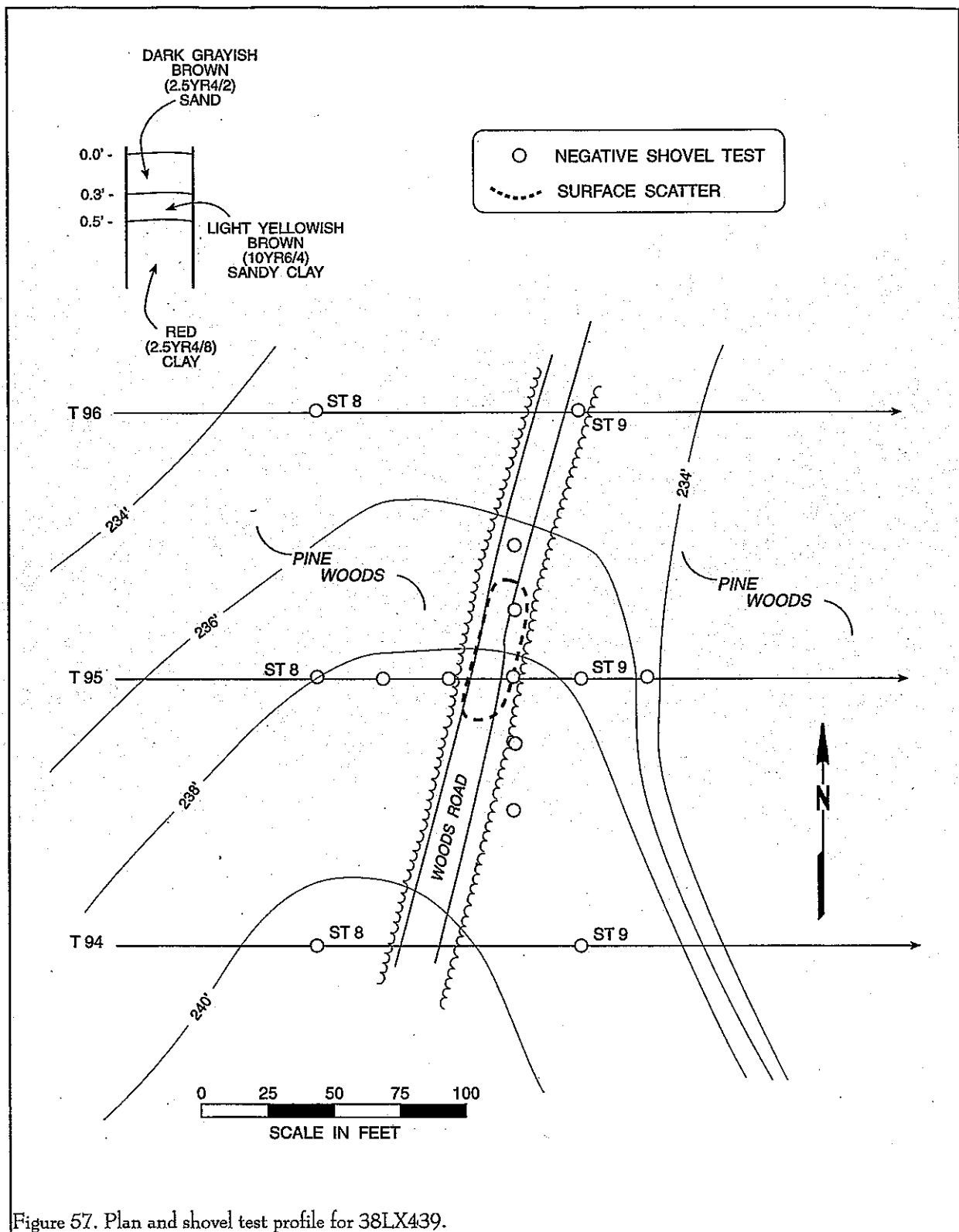


Figure 57. Plan and shovel test profile for 38LX439.

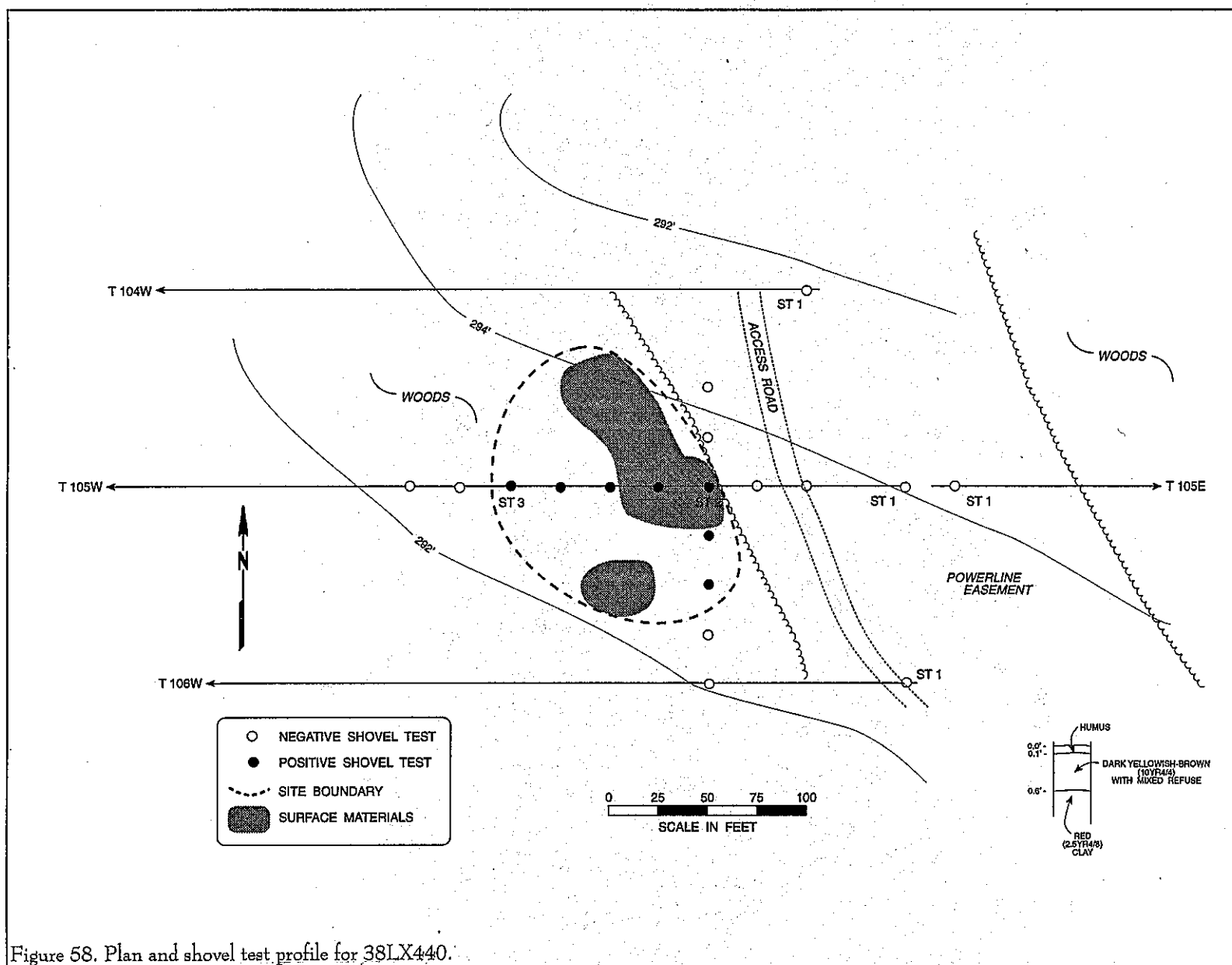


Figure 58. Plan and shovel test profile for 38LX440.

are E480755 N3766865 (NAD27 datum). The site was encountered on a south facing terrace at an elevation of 293 feet AMSL. The powerline easement itself is grown up in grass and scrub, while the forest to the west consists of pine and mixed hardwoods with a generally sparse understory.

The site consists of merging clusters or concentrations of relatively modern debris on the edge of the powerline easement and extending about 120 feet west into the woods. The materials were found extending about 140 feet north-south, encompassing an area of about 16,800 feet².

The site was immediately visible walking into the woods and materials were recovered from Shovel Tests 2 and 3 (Figure 57). In fact, the materials crunched underfoot as you walked through the area and the shovel testing revealed depths of up to about a foot of debris. Toward the edges of the site the materials thinned out and were frequently found in the upper 0.4 foot of the soil profile.

The items from this debris field included a range of predominately modern materials, such as bedsprings, toasters, irons, industrial light bulbs, condiment jars, beer cans (with paint still adhering), and similar items. All of the remains were so modern in appearance that only a representative sample of the smaller, but still identifiable items, were retained.

This site is situated in a portion of the complex that was extensively damaged during the dam construction. Figure 38 reveals that the area was clear cut and then borrowed. Since that time the trees in the area have grown up and been logged at least once. Those present now are perhaps 30 years old. The materials all seem to date from perhaps the mid-1960s through the mid-1980s.

This site certainly represents a trash dump, with individual heaps or piles still somewhat visible. None of the remains appear to be 50 years old. Although it must have been used for a number of years, and given its location may have been used by SCE&G, we have made no effort to identify oral history sources. Nevertheless, oral history research is far more likely to address the research questions pertinent to this site than

archaeological research. We do not recommend the site eligible because of its recent age. No additional management activities are recommended, pending the review and concurrence of the State Historic Preservation Office and the lead federal agency.

Historic Resources

As previously discussed, an area of potential effects (APE) 1 mile around the dam complex was investigated for standing architectural and historic resources. This work identified 41 historic resources, including 11 (2430126.0-.07, 2430128, 2430303, and 2430304) located on the survey tract, which will be briefly discussed first. Five of these 11 are recommended eligible (2430127.0, 2430127.02-.04, 2350304), three are recommended not eligible (2430127.01, 2430128, and 2430303), and three are less than 50 years old, but are likely to be eligible when they are old enough (2430127.05-.07).

Of the remaining 30 resources within the APE, but not specifically in the survey tract, 21 are recommended not eligible, two are recommended potentially eligible (and requiring additional research beyond the scope of this study), and 7 are recommended eligible for inclusion on the National Register.

Resources in the Survey Tract

Of the 11 resources on the survey tract, all but three represent extant components of the Saluda dam, Saluda Hydroelectric facility, or McMeekin plant. Site 2430127.0 is the dam and Saluda Hydroelectric Powerhouse. As previously discussed, the dam was built between September 1927 and September 1930, with the formal completion occurring in December 1930. The powerhouse, of steel, brick, and concrete construction, measures 250 feet in length, 57 feet in width, and 100 feet high. It contains metal sash projecting windows on the dam (west) facade and a series of five roll-up metal doors on the downstream (east) facade; one at grade and four to allow the transformers to be moved inside the structure for maintenance work. The walls are laid up in 5/1 American bond with concrete medallions and roof parapet. The roof itself consists of a flat concrete deck with membrane roofing.

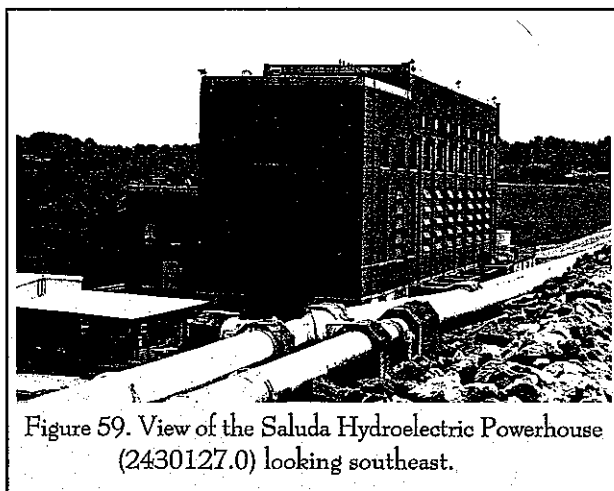


Figure 59. View of the Saluda Hydroelectric Powerhouse (2430127.0) looking southeast.

The structure was altered in 1971 by the addition of a fifth turbine at the south end of the structure. The Chief Engineer for the structure was William Spencer Murray, for whom the lake is named and the General Contractor was W.S. Barstow & Company. At the time of construction, the Saluda Dam was the largest earthen dam in the world for power production and the largest artificial power reservoir in the United States. This site also includes the five intake towers in Lake Murray, just beyond the dam and powerhouse.

These resources are recommended eligible under Criterion A: historic events, Criterion B: important persons, and Criterion C: architecture. The previous discussions of the historic context clearly demonstrate that the Saluda dam and complex are important both as typical of the development of investor-owned utilities and also as a major works projects in the Columbia region that spanned the period of general agricultural depression and went into the Great

Depression. The Saluda Hydroelectric plant represents the "state-of-the-art" in water generated power. The limited alteration of the property does not affect its ability to convey the feeling and association of significance. The Saluda project is clearly, and intimately associated with not only its engineer, William Spencer Murray, but also with one of South Carolina's foremost real estate developers of the period, T.C. Williams (for whom the lake was almost named). Finally, the resources are eligible for their architectural significance. The powerhouse represents a classic example of hydroelectric construction and the 1971 alteration was conducted in a manner that does not significantly affect the feeling or integrity of the structure.

While the proposed undertaking will not physically alter the powerhouse or intake towers, it will affect their setting. The proposed concrete retaining wall to be placed behind (i.e., west) of the powerhouse will represent a visual intrusion. Moreover, the strengthening of the dam will physically affect the existing dam structure. Nevertheless, there are no alternatives to this federally mandated undertaking. Appropriate mitigation of effects may involve documentation of the existing building and its setting to HABS/HAER standards.

Site 2430127.01 represents the weirs which have been added to the dam over the past 30 years as a

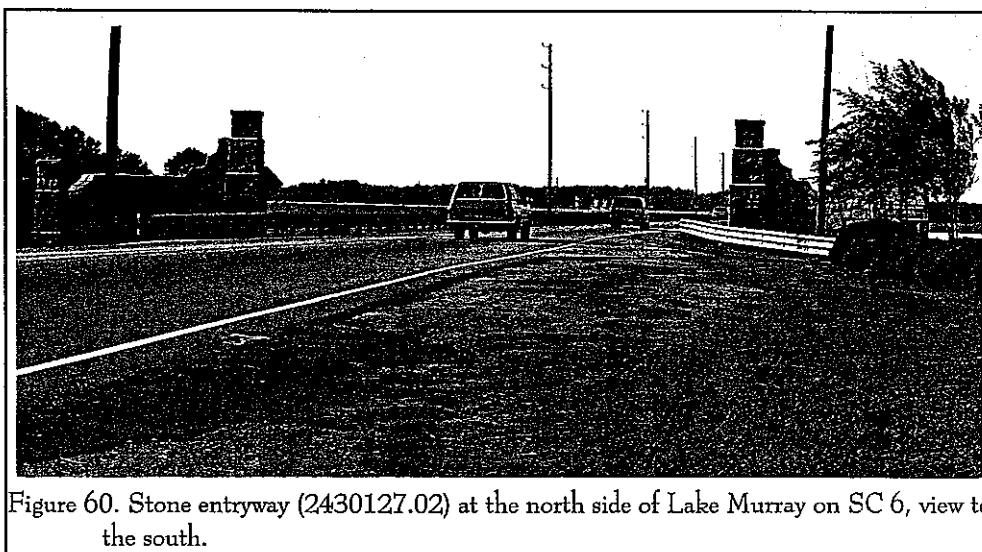


Figure 60. Stone entryway (2430127.02) at the north side of Lake Murray on SC 6, view to the south.

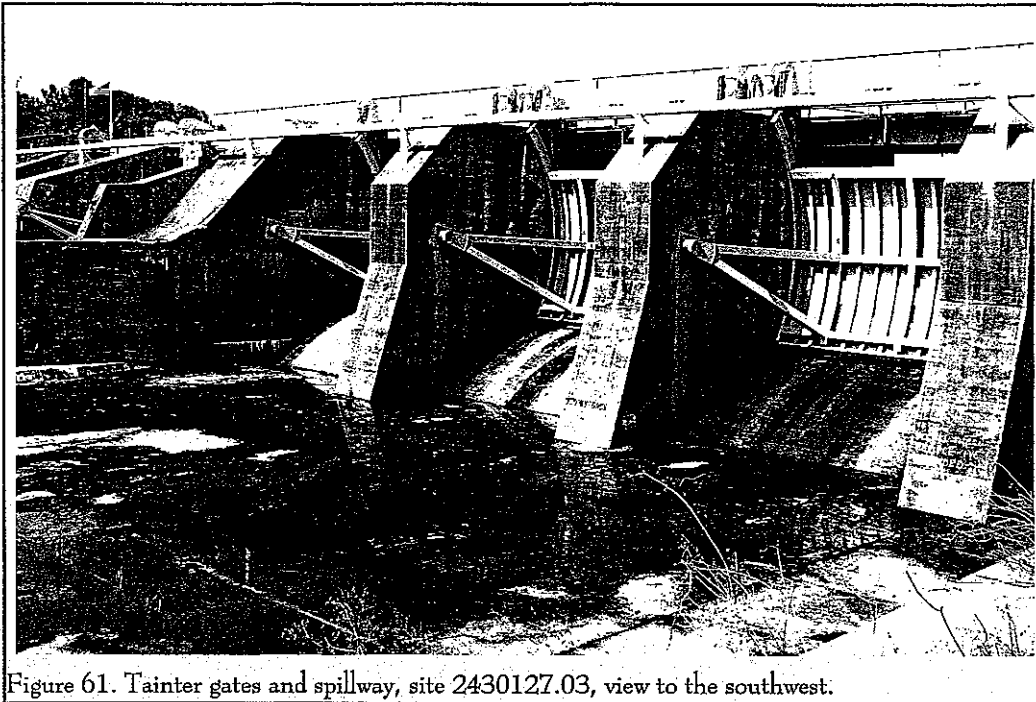


Figure 61. Tainter gates and spillway, site 2430127.03, view to the southwest.

means to accurately gauge the amount of water seepage through and under the dam. These devices collect water from a variety of points, channeling the water to concrete retaining walls with "V" notches or cuts that allow a constant trickle of water. Visual inspection can reveal if more water than normal is in these holding areas or flowing over the weirs — representing a dam abnormality. While these represent an interesting engineering solution to evaluating the safe operating conditions of the dam they are less than 50 years old. Even if they were of adequate age, they do not appear to represent a significant architectural resource. They are consequently recommended not eligible.

Site 2430127.02 represents the entrance gates at both the north and south ends of the dam on SC 6. These are constructed as broken coursed stone walls with bronze plaques. The north pair are readily visible as you cross the dam, while the south pair have been allowed to become overgrown and have almost entirely disappeared into the underbrush. They were erected ca. 1930 by the Highway Commission to commemorate the naming of the lake by a Special Act of the General

Assembly. The plaques provide information on the dam, the lake, and the power station.

These decorative entrance gates serve as memorials or markers to the construction of the dam and recommended eligible for inclusion on the National Register under Criterion A: historic events, Criterion B:

important persons, and Criterion C: architecture. Their justification under Criteria A and B is essentially identical to that for resource 2430127.0. They are recommended under Criterion C since they represent unique commemorative objects. These may be affected by the proposed dam work and by any potential widening of SC 6. Appropriate mitigation is for the structures to

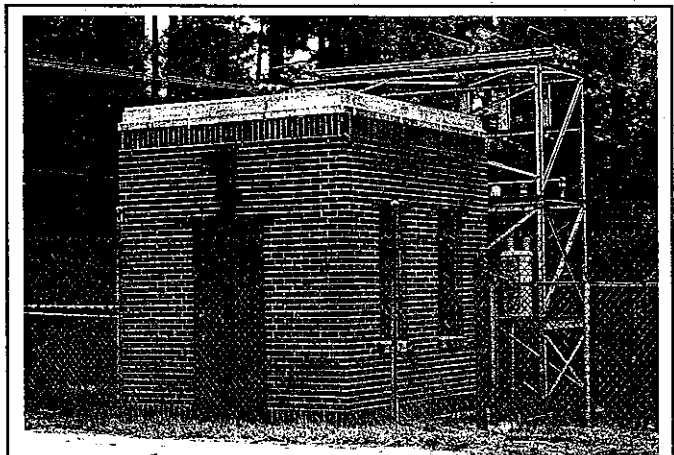


Figure 62. Switching house at the spillway (2430127.004), view to the northeast.

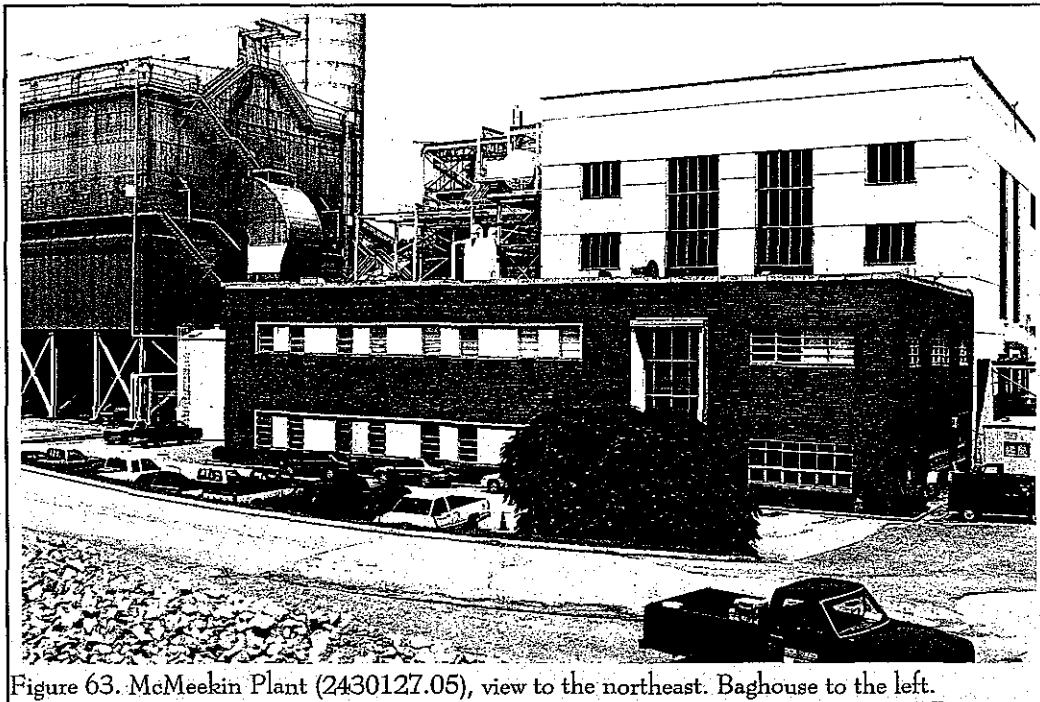


Figure 63. McMeekin Plant (2430127.05), view to the northeast. Baghouse to the left.

taken down, safely stored, and re-erected once the work is complete. A new marker should be added at that time explaining that they were relocated and why this was necessary. All original materials, however, should be re-used in their re-construction.

The Spillway and associated gates are represented by 2430127.03. The initial four gates were constructed as part of the Lake Murray/Saluda Hydroelectric project in 1930 and two additional gates were erected between 1943-1946. Each original gate is 37 feet 6 inches long by 25 feet high and weighs 40 tons.

This site, consisting of the six Tainter gates and concrete spillway, is recommended eligible under Criterion A: historic events, Criterion B: important persons, and Criterion C: architecture. Their justification under these criteria is identical to that for resource 2430127.0. It is our understanding that there may be additional remediation focused on these gates.

Site 2430127.04 is the switching building associated with the spillway. It houses the electric controls for the gates and construction was completed in

1930. The structure is built of bricks laid up in running bond with the bottom and top courses laid as soldiers. The structure has a flat, concrete roof. Metal sash windows are intact, although they have been painted over. An interesting decorative element is a cast iron electric lamp fixture over the

door on the west facade. This building likely matched the construction of the switching building originally associated with the Saluda Hydroelectric Plant (but which was demolished within the past decade).

This structure is recommended eligible under Criterion C: architecture as representative of the buildings constructed during the 1930s as switching facilities. The fact that this is the last remaining building of this type on the dam complex makes it even more significant. It is our understanding that this structure will not be affected by the proposed undertaking, although it seems susceptible to subsequent, and foreseeable, secondary affects, such as the widening of SC 6. Every effort should be made to preserve this structure intact and SCE&G should develop a preventative maintenance program for the building in consultation with a firm that has expertise in historic preservation.

Site 2430127.05 is the McMeekin Fossil Fuel Steam Generating Plant, constructed between 1956 and 1958, and altered in ca. 1985 with the addition of Bag Houses 1 and 2 on the north facade. The main building, on a concrete slab foundation, has

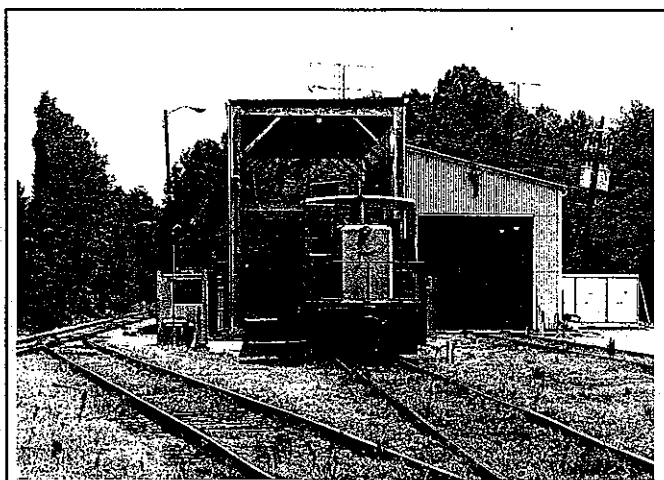


Figure 64. McMeekin Track Hopper House (2430127.06), view to the south.

structural steel framing, corrugated asbestos siding, corrugated glass, aluminum louvers, and a flat roof. An interesting "advancement" for the time was to leave part of the boilers, superheaters, air heaters, and water storage tanks unenclosed outside — reducing ventilating problems. In addition, the use of controlled circulation boilers allowed a significant reduction in the size of the building. Connected to the west facade of the plant itself is a two-story brick building that contains offices, locker rooms, labs, storerooms, and meeting rooms. The brick and concrete construction of the west facade is not only typical of the 1950s, but also picks up similar elements in the Saluda Hydroelectric Plant and serves to tie the two facilities together. The bag houses were added as a means to remove particulates and reduce air pollution.

Although this structure is less than 50 years old, it represents an innovative design for the time. It is also typical of industry efforts to have steam generating plants

take over base loads, while hydroelectric plants assume peak loads. Consequently, we believe that this facility will likely be eligible for inclusion on the National Register when it is 50 years old, in 2008. The proposed project, while not directly affecting the structure, will affect the feeling of the site, representing a visual intrusion.

Site 2430127.06 represents the McMeekin Track Hopper House where coal for the McMeekin plant is unloaded from railroad cars and conveyed to the stockpile between the hopper house and the main building. This facility was constructed at the same time as the McMeekin facility and has a typically industrial appearance. It is of steel construction with sheet metal cladding and the bulk of the building consists of the machinery necessary for its function, with only a relatively small control room at the east end of the structure.

Like the McMeekin plant, this structure is less than 50 years old. However, we believe that it will likely be eligible as a part of the entire McMeekin facility when it achieves sufficient age. We do not believe that it will be affected by the proposed undertaking.

Site 2430127.07 is a large sign situated on the ridge slope north of the McMeekin facility.



Figure 65. "Power for Progress" sign (2430127.07), view to the north-northwest.

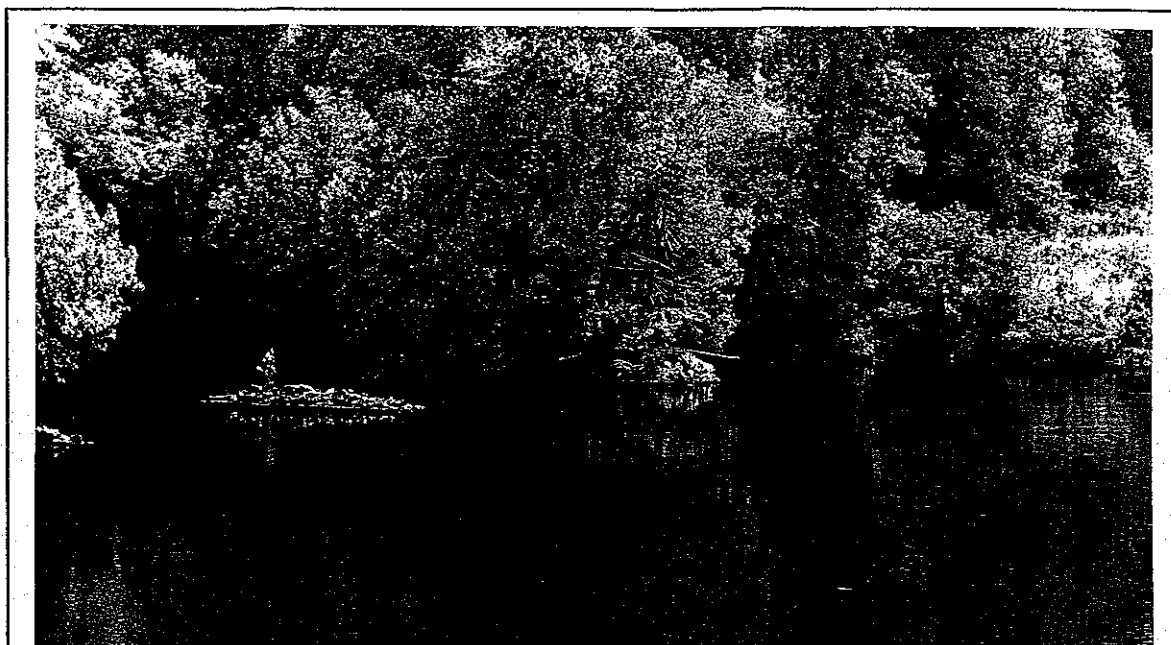


Figure 66. Remnant caissons for the temporary bridge across the Saluda River (2430128), view to the southeast.

Consisting of internally illuminated plastic letters, when operating it spelled out "Power for Progress." We have been unable to identify much information about this sign, although it appears to have been erected ca. 1958 — about the time that the McMeekin plant was completed. It represents what might be called corporate boosterism and was very typical of the period when utilities were dramatically increasing production and encouraging consumers to do the same, usually with very cheap electric rates. It was during this period that American industries, and the public, believed that not only was this cheap power inexhaustible, but that its use was clear and convincing proof of progress. This theme is echoed in the SCE&G corporate history, which includes the chapters, "Program for Progress" and "Service for Progress." Times, and philosophies, change, and this sign is no longer illuminated, although it remains intact and, we believe, an important icon of its age.

This sign is less than 50 years old. However, we believe that it will likely be eligible as a part of the entire McMeekin facility when it achieves sufficient age. We do not know if the sign will be impacted by the proposed undertaking, but recommend that steps be taken to ensure that it is not. Moreover, we recommend

that the sign receive appropriate preventative maintenance to ensure that it does not fall victim to "demolition through neglect."

Site 2430128 represents the remains of the temporary Saluda River bridge built during the dam construction to allow residents to move from one side of the river to the other. This bridge was constructed of timber harvested out of the proposed floodpool. It was supported in the Saluda River by a series of four timber and rock caissons. Today these caissons and a bit of timbering on the second from the south side are all that remains of the bridge, which was demolished after the completion of the dam. The roadway on the south side of the Saluda has essentially disappeared, with the slope to the bridge today heavily eroded. On the north side, however, there are several remnant sections of the dirt road, which took vehicles through the floodplain on a raised roadbed and then through the upland area on clay roads. The location of this bridge is shown on the historic map reproduced as Figure 21 and photographs of the bridge when it was under construction and in use are provided as Figures 22 and 37. A view of the remnant roadway is provided by Figure 53.

This site is recommended not eligible for



Figure 67. Harmon Spring (2430303), view to the southeast.

inclusion on the National Register since so little remains intact. The remains, while interesting and clearly identifiable, no longer possess the integrity necessary for eligibility.

Site 2430303 represents what is known locally as Harmon Spring. It appears to be a naturally flowing spring that existed before the construction of the dam and we have heard from several informants that the spring was used to water the mules used in the construction of the dam — a bit of oral history that we have been unable to confirm. Nevertheless the spring is free flowing and has never dried up. The name almost certainly comes from the owner of the property, Mrs. T.L. and C.C. Harmon (Option 3, Tract 3 on Land Atlas Map 2). The property has a somewhat odd "L" shape, with the spring occurring in the base of the "L," suggesting that the lines were drawn to include the spring.

The site was evaluated for eligibility under Criteria A and C. While there are references to its association with the construction of the dam, these are vague and unsupported. Likewise, while the spring has aesthetic qualities, we doubt that the area retains its original design. Today a PVC pipe is used to carry

overflow from one pond to a ravine and there is an intervening roadway which is of modern construction. As a result, we recommend this site as not eligible. It will likely be destroyed by the proposed undertaking.

Site 2430304 is the Yninger Cemetery, previously discussed as 38LX410, and recommended eligible under Criterion D for its archaeological significance. This site is also recommended eligible under Criterion C as a well preserved example of a small family cemetery. The site possesses most of its original layout and there have been no modern alterations of the cemetery since the construction of the dam. Since so many small family cemeteries were relocated from the Lake Murray area, this cemetery takes on very special importance as one of the few remaining intact examples.

We have previously outlined steps necessary to ensure the protection of this cemetery during construction, but it is appropriate to briefly repeat those steps here. The cemetery must be clearly marked on all construction documents with a clear note on the drawings and plans (not simply in the special conditions) that the area is off limits to all construction activity and all contractor personnel. A 70-foot square area around the site should be fenced, using high visibility barrier

fencing. At the conclusion of the construction, this area should have all vegetation removed and a chain link fence erected to mark its location. Signage should provide notice of appropriate regulations, such as the cemetery being closed after dark and that vandalism and theft are felonies under South Carolina law.

General Overview of Other Resources

Most of the sites identified in the APE are residences, with those built between 1900 and 1930 predominating. Most of those that retain integrity are modest-to-substantial dwellings probably occupied by their owners or long-term renters. There are very few whose plan and detailing indicate impressive displays of affluence. None, however, appear to represent the remnants of very modest sharecroppers' houses. Those dwellings appear to have been especially selected against.

The properties that have greater architectural interest or integrity reveal some aspects of architectural choices or opportunities in the survey area. As more survey is done in this area and the data from those structures acquired by Lexington Water Power Company is examined¹, appropriate comparisons and summaries will be possible. The sites that are too deteriorated or altered to warrant National Register consideration, nevertheless provide a good resource for an architectural survey of a larger area than the limited APE.

As previously discussed, we looked primarily at eligibility under Criterion C, and most properties are not considered eligible because of their lack of integrity. Those that are considered eligible are either the best examples of types found in the project area, such as the I-house, or the lateral gable 1½ story structure with Craftsman influences. Also present are three cemeteries, two examples of rural church cemeteries (not to be confused with the suburban results of the nineteenth century "rural cemetery" movement, and one example

of a small family graveyard. Finally, one example of relatively ornate church architecture is also identified.

Sites Recommended Eligible or Potentially Eligible

There are nine sites recommended eligible or potentially eligible in the APE, including three I-houses, two folk structures, one church, and three cemeteries. Each of these is briefly discussed below.

The I-house is a two-story house, one room deep, having a lateral gable roof and usually a centered entry (McAlester and McAlester 1984:96-97). Three examples were documented during this study, all with single windows and two with one-story porch (the third example has a porch with two tiers).

Structure 2430126, built ca. 1840, has an asymmetrical front facade exhibiting three bays on the upper level and five on the lower, where the central door with sidelights is flanked to the right and left by a door and window. There is a one story porch across the front facade. The structure is historically known as Selwood and is reported to have been built by John Shuler. There is a rear shed addition, as well as two flankers connected to the main structure by hyphens. This structure is recommended eligible under Criterion C: architecture.

Structure 2430291, built ca. 1840 or perhaps earlier, is five bays wide with a full-facade. A left porch extension is possibly a ca. 1910 addition. The lower floor exhibits three central doors and single end windows. Upper windows are 6/6, while lower windows are 9/6. The right unattached wing dates from the house core, but has been moved to this location from behind the house. The left wing was added ca. 1910. The central door is surrounded by a multi-paned transom and sidelights. The house was built by either Jacob Wingard Dreher (1831-1905) or his father, Daniel (1798-1832) (Fox and Harmon 1982:17). Associated structures, present in 1919 had largely been eliminated by 1943. When the property was purchased by Dr. Austin T. Moore, Sr. in 1945 the focus of the tract turned to milling, chickens, and turkeys. Remnants of these activities are still present as a mill building, a cold storage building, and a series of chicken and turkey houses on the opposite side of Dreher's Ferry

¹ During this study we identified a set of ca. 1927 photographs of structures on approximately 188 options associated with the floodpool of the Saluda project. These are currently being examined and will be the focus of an upcoming article on Lexington's lost architectural heritage.

Road (now called Windward Point Road) as the main house. Although modified, this house still retains its original character. In addition, while the store building has been moved, it is the only example identified during this study. The site is recommended eligible under Criterion C: architecture.

Structure 2430306 is also thought to have been built ca. 1840. The structure has a symmetrical front facade 3 bays in width. Unlike the other two examples, this house has a two-tiered porch supported by four posts. The upper tier is enclosed with a balustrade and decorative sawn balusters. The house is thought to have been constructed by a Dr. Efird and was owned by D.F. Efird, et al. at the time of the dam construction. It was acquired by the McMeekin family ca. 1949. This site is recommended potentially eligible for inclusion on the National Register under Criterion C: architecture, pending additional research on alterations to the building.

There are two massed plan, side-gabled houses that McAlester and McAlester (1984:98-99) classify as folk houses which appear to retain their integrity and which represent good examples of an architectural style found throughout the survey. Structure 2430124 is the Corley House, built ca. 1925. It has a one story full facade porch with shed roof. There are two doors on the front facade flanked by windows with 6/6 pane configurations. There is also a rear addition, which appears to be historic (it was present at least by 1943). Alterations to the structure are limited to a reworked front porch with CMU steps, a concrete deck, and replacement balustrade. There is also CMU infill of the foundation, probably done at the same time. This structure is recommended potentially eligible under Criterion C: architecture, pending additional information concerning the alterations.

Structure 2430297 is known as the E.S. Dreher House and it was built in 1918 by the Dreher family on the site of the original antebellum plantation house which burned in 1915. This is a one and a half story structure that has a one story full facade porch with a shed roof. There is centered shed dormer with tripartite windows having a Craftsman pane configuration. There are right and rear additions, with the side addition added ca. 1940. The front facade has

double windows with 2/2 panes. The central door is flanked by sidelights. This structure was the home of E.S. Dreher, Superintendent of Columbia schools from 1893 through 1916 (for whom Dreher High School was named). The property was acquired by the Wyse family in the 1920s. The structure is recommended eligible for inclusion on the National Register under Criteria B: famous person and C: architecture.

Structure 2430292.0 is St. Michael's Lutheran Church, also known as the "Blue Church." The current church was constructed in 1921 by Willie H. Koon of Chapin, identified by Fox and Harmon (1982:36) as a master carpenter who drew plans for 34 churches in South Carolina. This is the third church built on this site. This is the organizational site of the S.C. Synod in 1824 and synod meetings were held here in 1826, 1857, and 1924. It is also reported to be the first ecclesiastical meeting of the Lutheran Church in South Carolina in 1816. Fox and Harmon describe the church as "Carpenter Gothic Revival." It is of weatherboard construction with a gabled center facade having flanking towers. There is a faux balcony overhanging the entry. The original metal shingles have been covered (or replaced) by composition shingles. Likewise the original decorative wood shingles on the two towers and front gable have been covered with asbestos siding. This structure is recommended eligible for the National Register under Criterion C: architecture (Criteria Consideration A: a religious property which derives its significance primarily from architecture).

Associated with the church is a cemetery dating to at least 1813. Site 2430292.01 represents a well maintained and cared for example of a rural churchyard cemetery. Both family plots and individual burials are interspersed in the graveyard to the east of the church. There are a number of early marble examples, including those carved by the Walkers of Charleston. Also present are fieldstones marking a number of graves in close proximity to the church, where burials were first placed. The cemetery also contains a granite monument to individuals, "whose bodies now rest beneath the waters of Lake Murray," which was erected ca. 1930. This cemetery is recommended eligible under Criterion C: architecture (Criteria Consideration D: a cemetery which derives its

RESULTS OF SURVEY

significance from distinctive design features). The layout of the cemetery, the stones and their carving, and the landscape are all well preserved and exhibit the characteristics typical of rural church cemeteries.

There are two other cemeteries in the APE which we recommend eligible. One, 2430289, is the cemetery associated with Pleasant Springs AME Church. The church is a modern (1971) replacement of the original building with only the stained glass reused. The cemetery, however, exhibits no alterations or intrusions. It contains both marked and unmarked graves (the later evidenced by rolling topography and sunken depressions). The oldest section is found at the western edge, north of the church building. Marked graves include those with both marble and granite commercial stones, concrete markers, and also many field stones. These early graves cluster between 1907 and 1920, suggesting that the cemetery predates the 1914 founding of the church. Large portions of the old section are exposed red clay without plantings, probably reflecting an area which was originally swept and kept free of vegetation. The section dating from about 1920 through 1950 contains fewer fieldstones, although there are scattered earlier graves, suggesting that there may be more than the ca. 200 marked graves seen today.

The cemetery is characteristic of upland African American cemeteries and represents an important resource, especially with so many of the African American graves in the area having been removed for the Saluda Dam. We are recommending this site eligible under Criterion C: Architecture (Criteria Consideration D: a cemetery which derives its significance from distinctive design features). It is important to understand that to satisfy this criterion a site need not possess "high" status or "high" architecture. As a graveyard, it need not possess wrought and cast iron fences, elaborate or ornate monuments, or extensively landscaped surroundings. It need only be representative of a type or class and possess integrity.

The last resource identified by this survey which is in the APE and which we recommend eligible is the Corley Family Cemetery, 2430302. This site, which dates to at least 1886, contains six marked graves including two with marble dies on bases, one marble headstone or tabletstone, and three granite

dies on bases. Plantings include several boxwoods and ornamental grasses. Even the 1943 aerial photography for the area (ASX-9C-68, south of Figure 38), however, suggests that it was open as it is today. Identified are the graves of W.A. Corley (1848-1918), Sarah Louise Corley (1870-1953), Amanda Kleckly (1840-1910), Polly Frances Corley (1826-1886), Missouri Almema Corley (1861-1942), and Amos N. Corley (1856-1921).

This cemetery is characteristic of the small family graveyards which used to be very common in the area prior to the creation of Lake Murray. Being on the periphery of the construction, this cemetery has survived without a great deal of alteration and is still maintained in good condition. We are recommending this site eligible under Criterion C: Architecture (Criteria Consideration D: a cemetery which derives its significance from distinctive design features). As with resource 2430289, it is important to understand that a cemetery need not be of a particular style or high status in order to be eligible — any more than a structure needs to be a big house with white columns in order to be eligible. The Corley Family Cemetery represents a good, well preserved example of the small family cemetery. Possessing integrity, the site is recommended eligible.

Potential Effects and Mitigation

None of the sites in the APE are expected to face direct impacts, i.e., demolition or removal. All, however, may face less obvious effects. The need to use explosives in order to quarry rock may cause shifting of the foundations or cracking of plaster. Increased particulate loads may deface structures or gravestones. The use of heavy vehicles may likewise increase dust levels or perhaps cause cosmetic or structural damage.

For the foreseeable effects, we recommend that a prudent approach is to document the current condition of structures and sites. This may include the use of detailed structure surveys (perhaps including interior surveys) and recording instruments for seismic shocks and particulate loads.

This approach would allow monitoring of the sites during the construction phase. SCE&G would

need to assume responsibility for damages to the historic properties caused by the construction activities, with the assurance that those damages would be repaired using the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.

CONCLUSIONS

This study involved the examination of 250 acres of the 550 acre Saluda Dam tract situated east of SC 6 and south of Bush River Road. The tract, owned and operated by South Carolina Electric & Gas Company, contains the Saluda Dam, the Saluda Hydroelectric Plant and the McMeekin steam generating station, as well as a number of utility buildings, related structures, and a lineman training center. Of the 550 acres about 300 acres have been eliminated from the survey because of extensive erosion, construction, borrow pits, and other factors which resulted in the complete loss of integrity. We found that even the 250 acres included the study exhibited considerable erosion, largely from the operation and maintenance of various facilities.

This research has been conducted in anticipation of a major project to remediate the Saluda (Lake Murray) Dam by additional downstream construction. This will necessitate the excavation of a large on-site quarry, the relocation of various roads and utility lines, the construction of new roads, the filling of some wetlands, and other related construction activities. This research, conducted for South Carolina Electric & Gas Company, provides results of the cultural resources investigation and is intended to assist that organization comply with their historic preservation responsibilities.

Historic research reveals that this portion of Lexington County was settled by Swiss and German farmers. Slavery, while present, was never a major aspect of the agricultural base. Plantations existed, but so did relatively small family farms. Cotton was perhaps more common in the postbellum, although the landscape consisted of a patchwork quilt of farms, often being subdivided along family lines for several generations. Although this agricultural base was less aggressive than many in the state, it is likely that region saw extensive erosion at least by the postbellum. By the 1930s much of the region had severe sheet erosion and even gullying. Much of the survey area had been converted to woodlots

by the time Lexington Water Power Company was acquiring lands for the creation of what would become the largest earthen dam ever constructed for power generation, as well as the largest power reservoir in the United States.

The creation of the Saluda Hydroelectric Project is consistent with similar undertakings by investor owned utilities during the 1920s. It used well understood and very standard technology to dam the Saluda River and create hydroelectric power. The Lexington Water Power Company owned no transmission facilities and was entirely devoted to the creation of electricity that could be sold to other companies. In 1943 the Lexington Water Power Company merged with the South Carolina Electric & Gas Company. It was during this period, extending into the early 1960s, that Rose (1995) explains electric companies across the country focused on expanding their consumer base by encouraging the public to use more of the cheap power that was available. One corporate logo of SCE&G was "Power for Progress." Rose would suggest that, on a nationwide level, there was a belief that progress was not simply possible, but inevitable.

The creation of the facilities at Lake Murray engaged a huge work force as the Central Midlands were reeling under a decade of agricultural depression and poverty. But the project caused extensive damage to the 550 acres that comprised the project core. Borrow pits were excavated, forests were cleared, and roads and rail lines were built — all leaving dramatic scars on the landscape. Moreover, the Saluda Dam complex had continued to be a working industrial site. Additional structures, most notably the McMeekin Plant, have been built, roads constructed, railroads removed, stripped areas restored as forest, and new construction sites cleared. An examination of historical documents and aerial photographs reveals that virtually every area in the survey tract has been touched by some form of construction activity.

A series of 134 transects spaced at 100 foot intervals were used to examine the study tract, with shovel tests being excavated at 100 foot intervals. A total of 1,189 shovel tests were excavated (not including additional shovel tests to examine specific site areas). The shovel tests revealed generally deflated soils and extensive erosion. Comparison of the observed soil profiles to those typical of preserved Cecil soils suggests that anywhere from 0.5 foot to as much as 1.2 feet have been lost.

The eight archaeological sites and one isolated find identified (38LX00, 38LX410, 38LX434-440) represent a range of site types, including a historic cemetery (38LX410), a twentieth century dump (38LX440), an early to mid-twentieth century refuse deposit (38LX434), and an isolated find of a late eighteenth century beer or wine bottle fragment (an isolated find, designated 38LX00). Several additional sites yielded infrequent historic remains. The prehistoric sites all represent lithic scatters. Quartz interior flakes are the most common artifact present, although rhyolite was also recovered. Tools are sparse, including only rough bifaces or unifaces and no finished tools. These provide no diagnostic remains, although the assemblages are consistent with Middle Archaic deposits.

Of these archaeological sites the only one recommended eligible for inclusion on the National Register is the historic cemetery (38LX410). This site is recommended eligible under Criterion D since it is likely that the site contains bioarchaeological data sets that can address significant research questions, including topics of diet, disease, ethnic populations, use of coffin hardware, and organization of small family cemeteries.

The remaining archaeological sites lack the data sets necessary to address significant research questions and most also evidence a lack of the integrity necessary to allow research questions to be examined. As a result, all are recommended not eligible.

The failure to identify more sites — both prehistoric and historic — is certainly the result of the extensive construction the tract saw in the late 1920s. Documentary research reveals that there should be several farms on the survey tract. These, however, have

been completely erased from the landscape. Extensive ground modifications have not only eliminated structural remains, including even the presence of brick, but also seem to have removed trash deposits. All were probably picked up in mass and used as fill for the dam project. Likewise, there were several clusters of "temporary" Lexington Water Power Company buildings in the survey area. These, too, were completely removed at the conclusion of the construction process — either demolished or, more likely, sold to be moved off-site. Their short duration likely accounts for the lack of associated trash deposits.

A survey of historic sites was conducted within a 1.0 mile APE which covered about 5,500 acres. Much of this area represents new developments, so the acreage makes the survey sound more encompassing than it actually was. Nevertheless, 11 resources were identified on the survey tract (2430127.0 - 0.7, 2430128, 2430303, 2430304).

The bulk of these resources include sites and features associated with electrical production, including the dam, powerhouse and intake towers in Lake Murray (2430127.0), the weirs used to gauge the seepage through the Saluda dam (2430127.01), entrance markers or gates at both ends of the Saluda dam (2430127.02), the spillway (2430127.03), the switching building for the spillway (2430127.04), the McMeekin steam generating facility (2430127.05), the McMeekin Track Hopper House (2430127.06), and the "Power for Progress" sign (2430127.07). Also identified are the remains of what was known as the Temporary Saluda River bridge (2430128), erected to allow residents to cross the Saluda during the construction of the dam. Harmon Spring (2430303) is reputed to have been used to water the mules that worked on the dam construction. Today it is a free flowing spring at the southern end of the dam. The Yninger Cemetery, 2430304, was identified during the Lake Murray construction project, but was never moved since it was situated outside the floodpool. Today it is at the southern end of the dam on a small ridge remnant.

Of these resources, five are recommended eligible for inclusion on the National Register, including the dam, powerhouse, and intake towers (2430127.0); the entrance gates for the dam (2430127.02), the

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spillway (2430127.03) and its switching building (2430127.04); and the Yninger Cemetery (2430304). In addition, three resources (McMeekin Station, 2430127.05; McMeekin Track Hopper House, 2430127.06; and the "Power for Progress" sign, 2430127.07) are less than 50 years old, but will likely be eligible for inclusion on the National Register when they are old enough — in about 8 years. The remainder (2430127.01, Saluda Dam weirs; 2430128, Temporary Saluda River Bridge remains; and 2430303, Harmon Spring) are recommended not eligible since they do not possess the necessary integrity or are not 50 years old (and even once meeting the age criterion aren't likely to be significant).

Those resources recommended eligible are all likely to be affected by the proposed undertaking. The dam, for example, will not only be physically altered, but its visual integrity will also be altered. The impact on its visual integrity could be mitigated by using a terraced, rock rubble design that is consistent with the dam today. We understand, however, that this is not possible. Consequently, it may be prudent to better document the dam as it exists today. Other resources, such as the Saluda Hydroelectric Plant, will not be directly affected by the construction, but their surroundings will be changed by the proposed construction. Again, appropriate mitigation may be the photographic documentation of the facility to HABS/ HAER standards. The impact on other resources, such as the spillway, is not clearly determined at this time. Ideally, any remediation should leave the facility looking as much as possible as it does today. As in the case of the dam, if this is not possible, then documentation to HABS/HAER standards may be the only feasible mitigation. In the case of those resources which, because of their age, are not currently recommended eligible, but are likely to be eligible in the near future, we recommend that SCE&G develop a maintenance plan that ensures the integrity of the sites is maintained.

Because of its proximity to the construction area, very special care is recommended for the Yninger Cemetery. There we recommend clearly marking the cemetery on all construction documents with a note on the drawings and plans (not simply in the special conditions) that the area is off limits to all construction

activity and all contractor personnel. SCE&G should also fence this area using high visibility barrier fencing. At the conclusion of the construction, this area should have all vegetation removed and a chain link fence erected to mark its location. Signage should inform of appropriate regulations, such as the cemetery being closed after dark and that vandalism and theft are felonies under South Carolina law.

In addition to those resources our work also identified 30 sites in the APE, but not within the project tract. These include primarily structures, although three cemeteries are also incorporated. Of these resources, seven are recommended eligible and two are recommended potentially eligible. The potentially eligible structures include one I-house (2430306) for which we recommend additional research and one massed-plan structure (2430124) for which we recommend additional research on alterations. The sites recommended eligible include the three cemeteries (one African American church cemetery, 2430289; one white church cemetery, 2430290.01; and a small family cemetery, 2430302). Structures recommended eligible include two I-houses (2430126 and 2430291), one massed plan structure (2430297), and one church (2430290.0).

Although none of these sites will be affected by construction activities or be visually affected by the proposed undertaking, they all may be affected by seismic shocks from the blasting or by the increased particulate loads resulting from construction and construction traffic. We recommend that SCE&G conduct site assessments at each eligible or potentially eligible site to document pre-construction conditions.

Should any repair work be necessary at the conclusion of the construction it should be conducted in compliance with the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. For example, cracked or damaged plaster should be repaired if possible. If this is not feasible, it should be replaced with similar plaster. The use of wallboard is not an acceptable repair alternative.

It is possible that archaeological remains may be encountered in the corridor during construction

activities. As always, contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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